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THE INFLUENCE OF VALUES AND SELF-CONCEPT ON GENDER DIFFERENCES IN OCCUPATIONAL ASPIRATION LEVEL AMONG HIGH ACHIEVING ADOLESCENT FEMALES AND MALES

The University of North Carolina at Greensboro ED.D. 1985

THE INFLUENCE OF VALUES AND SELF-CONCEPT ON GENDER DIFFERENCES IN OCCUPATIONAL ASPIRATION LEVEL AMONG HIGH ACHIEVING ADOLESCENT FEMALES AND MALES

by

Myrna Kay Troxler Brown

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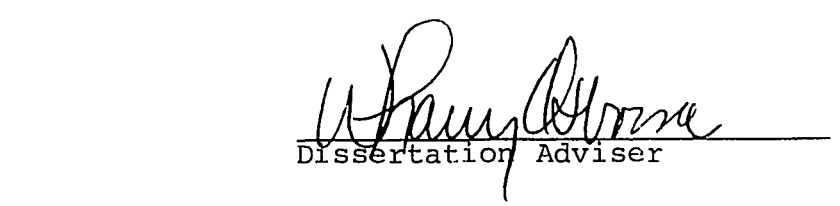

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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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BROWN, MYRNA KAY TROXLER, Ed.D. The Influence of Values and Self-Concept on Gender Differences in Occupational Aspiration Level Among High Achieving Adolescent Females and Males. (1985) Directed by Dr. W. Larry Osborne. 150 pp.

The purpose of this research was to assess gender differences in 1) work values, 2) how work values relate to occupational aspiration, and 3) how self-conceptual variables relate to occupational aspiration. Level of aspiration was studied using four variables: 1) Level of Education Desired, 2) Prestige of Occupation Desired, 3) Economic Returns of Occupation Desired, and 4) Gender Dominance of Occupation Desired. One hundred and fifty-two high-achieving eighth grade students, 99 females and 53 males, comprised the sample.

Super's Work Values Inventory was given to this group of students, and *t* tests were computed. Significant gender differences were found for the values of Altruism and Economic Returns. Males valued Economic Returns more than females, and females valued Altruism more than males. Work values from this inventory were used in a multiple regression procedure to assess how work values can explain or predict level of aspiration of males and females. It was found that Economic Returns, Altruism, Prestige, and Independence were important predictors of aspiration level for females, and that Intellectual Stimulation was an important work value in predicting level of aspiration for males. Significant sex differences in prediction of aspiration level were found for Economic Returns, Altruism,

Independence, Surroundings, Security, Prestige, and Intellectual Stimulation.

The Piers-Harris Children's Self-Concept Scale was also administered to this group as well as some occupational self-concept measures (in the form of questionnaire items). It was found that two Piers-Harris Scales (as well as the Total Score) were significant predictors of educational aspiration level for females (Intellectual and School Status and Physical Appearance and Attributes), and one Piers-Harris Scale was significant for males (Intellectual and School Status). Significant sex differences in prediction of educational aspiration level were found for the Physical Appearance and Attributes Scale. One of the occupational self-concept measures was a significant predictor of aspiration level for males and females (self-perception of money one will be making when 35 years old); this variable showed significant sex differences in its prediction of educational aspiration level and Gender Dominance of Occupation Desired. Findings are reported for each of the four measures of aspiration.

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CHAPTER I

INTRODUCTION

The values that one holds are clearly a determinant of career choice (Katz, 1973). Value structures are a significant factor in decision-making processes and reflect the framework from which persons operate when viewing themselves in a particular occupation (Super, 1957).

Occupational image is not only formed from a person's value structure, but also from self-perception. Most people actually see themselves in the career which suits their value preferences; a low self-concept can block them from entry into a position which matches their abilities (Super, 1951; 1963). Socialization processes play a significant role in forming the value structures which are held by males and females alike (Rokeach, 1973).

Females have multiple competing value choices and societal pressures that are not present for males (Tittle, 1981). These unique needs of females have been largely overlooked in theory building for self-concept, value and moral development theories, and particularly in theory building in the area of career development and career decision making which has "focused narrowly on the development of the career paths of male subjects" (Tittle, 1981, p.7). Marriage and parenthood are factors which

compete more powerfully for the attention of females in their value structures. They must weigh these factors more heavily along with their ability to succeed in a career. "For women, these other, traditionally sex-related roles were and are highly salient, leading to 'contingency' planning and delaying or 'stalling' in career development, committment, and work plans" (Tittle, 1981, p. 7). The seeds of these circumstances for women are planted early and begin to come to their fruition in adolescence (Super, 1957).

Males and females who are achieving (as measured by school success) at an equal level in adolescence have a great discrepancy in achievement (as measured by success on the job) beginning after these same males and females enter the work force (Spence, 1983, p. 11). All of the factors mentioned above may contribute to this issue in varying degrees and may contribute differently for females than for males. The question examined in this study is whether females are more significantly affected than males by these socialization processes, which results in low self-images as shown by lower occupational aspiration.

Statement of the Problem

The purpose of this study was to explore the relationship between occupational aspiration level and other significant variables in adolescent value structures.

These relationships are explored for high-achieving females and males. Gender differences will be of particular interest in relating work values and self-conceptual variables to aspiration level.

The specific questions to be investigated for a group of high achieving females and males are the following:

1. Are there differences between males and females in work values?
2. Is the relationship between work values and level of aspiration the same for females and males?
3. Do the following variables add to the explanation of aspiration level for females and males:
    a. Self-concept.
    b. Amount of commitment to career as opposed to marriage, children, and other.
    c. Perception of potential opportunity for entry into high level jobs.

Definition of Terms

Although values and development of self-concept will be discussed at length in the review of literature (Chapter

II), brief working definitions for these terms are provided in this section. Achievement and level of aspiration are also defined briefly at this point.

Values

Rokeach has formally defined a value as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence" (1973, p. 5). "They (values) are the qualities which people desire and which they seek in the activities in which they engage, in the situations in which they live, and in the objects which they make or acquire" (Super, 1957).

Self-Concept

There are two meanings of the term self-concept which appear to be prevalent. Hall and Lindzey (1970) have labeled these as self-as-object and the self-as-process. The self-as-process corresponds to the Freudian conception of the ego, which refers to the self as a doer, an executor, and integrator of psychological functions. All commerce with reality is negotiated through the self as doer. Self-as-object is the individual as an experiencer and interpreter of one's own experience. Self-concept will be defined for purposes of this paper, as Combs and Snygg

(1959) have stated as, "What the individual believes about himself" (p. 494).

Further, the self-concept will be considered a "relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes" (Piers & Harris, 1984). This is a self-as-object interpretation of the self.

Achievement

"Achievement is task-oriented behavior that allows the individual's performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standard of excellence" (Spence, 1984, p. 12). School-related achievement is defined in this study by grades and achievement test results (outlined in Chapter III). Work-related achievement is defined by "level of aspiration".

Level of Aspiration

Level of aspiration is defined in this study by four measures of achievement which may be acquired after graduation from high school: 1) further education (e.g. college, technical training), 2) a prestigious occupation, 3) an occupation which offers economic reward, 4) an occupation

which is male dominated. (Detailed explanations appear in Chapter III.) "Success in the vocational sphere typically brings higher salary, status, privéleges, and prestige, and access to still more advantageous positions in which the extrinsic rewards are even greater" (Spence, 1984, p. 14).

Significance of the Study

Many traditional theories in counseling have been built upon male orientations, using male subjects, and structuring counselor attitudes to a response set that responds to male psychology only. This presents a problem in counseling females, particularly in the area of career counseling where value orientations affect career choice. "It has become commonplace among career psychologist to suggest that currect theories of career choice cannot adequately explain the vocational behavior of women" (Patterson, 1973). Holland (1966) critiqued his own theory on this point: "it is based chiefly on studies of men and is probably less useful for understanding the behavior of women."

There is an urgent need, therefore, to add to the body of literature in this area information that is explanatory of the circumstances which continue to propagate stereotyped socialization processes which result in lower aspiration levels among females. Farmer

(1976), after reviewing the literature on achievement and career motivation among females, concluded that such motivation differs due to the following factors: (a) reduction in academic self-confidence, (b) fear of success, (c) vicarious achievement motivation, (d) home-career conflict, (e) myths about women and the world of work, (f) lower risk taking, and (g) sex-role orientation. Fitzgerald and Crites (1980) argued that these factors may be acting upon women, though it is misguided to think that they are inherent in women's motivational framework. More information on how to counteract these variables is needed to explore what counselors can do in their role of "taking for granted that the choice of an occupation should reflect the individual's optimal potential" (Williamson, 1959). Fitzgerald and Crites (1980) also stated that the literature leads to the conclusion that "It seems reasonable to assume that all individuals, regardless of sex, share the basic human need for self-fulfillment through meaningful work." They interpreted the possibilities for women's equity partially in economic terms: "that is, women will not achieve equity until they have access to financial resources and are not dependent on others for their livelihood" (p. 61).

They feel that the socialization process should be confronted, not cooperated with, and that therein lies the role of the counselor.

"Although there are many changes in women's workforce participation and in ages of marriage and fertility rates, these have not been reflected thus far in the desegration of occupations and equity in earning" (Tittle, 1981). Tittle went on to conclude from her studies that guidance and counseling "must contribute more actively to assisting women to become aware and explore the domain of occupations more realistically" (p. 12).

By adding to the literature related to value orientations as they relate to career choice, it is hoped that more appropriate theories and processes will eventually develop for counseling female adolescents to feel free to meet their potential in career choices. Since exploration of values is a process used by counselors in career guidance activities and in counseling, it is significant for counselors to have knowledge of how value systems affect career choices.

CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature concerning gender differences in self-concept and value structures as they relate to occupational aspiration level is organized into the following areas: (1) development of gender differences in self-concept and values and (2) gender differences in occupational aspiration level as influenced by value systems.

Gender Differences in Self-Concept and Values

Gender Differences in Development of Self-Concept

Much theoretical exploration of the relationship between sex and self-concept variables has occurred. Most of the work has treated self-concept as peripheral to psychosexual development or social stratification. Nearly all theories have treated women either "as deviants from an implied male norm or as an underprivileged group deserving of special attention" (Wylie, 1979, p. 157).

Self-concept has often been considered to be a "fixed" quality not affected by situational variables. It has been presented in many research studies as a frame of reference by which persons assign themselves a value along a dimension. The basis for comparison, or reference point is often based on theoretical underpinnings that have been established on studies

of male subjects. It has historically been assumed that self-appraisals are analogous between the sexes. It is not known by which standards women measure their value. They may be using men, other women, or both as their reference group. The relationship between self-concept variables and sex has often been phrased in terms of over-all self-regard. High self-esteem, positive feelings about self, lack of feelings of inferiority have been the bases for comparison (Wylie, 1979). Maccoby and Jacklin (1974), who examined 30 studies on self-esteem, found no sex differences on this trait. They concluded that "there is no overall difference between the sexes in self-esteem, but there is a male cluster among college students made up of greater self-confidence when undertaking new tasks, and a greater sense of potency, specifically including the feeling that one is in a position to determine the outcomes of sequences of events that one participates in" (p. 158).

Psycho-biological sources of self-regard were most thoroughly explored in Freud's writings on psychosexual development (1927, 1931, 1933). He postulated that a little boy's first feelings of superiority originate in the discovery that he possesses a penis, and consequently, that the little girl's first encounter with inferiority is her discovery that she lacks one. This is considered a devastating and pervasive blow to the pride of the girl,

which continues throughout life to be a source of developmental problems. Not until maternity can the female resolve this envy of the male and his possession of a penis. Upon the birth of a child the female may establish some feelings of worth. These feelings are enhanced if the child is a male. Freud's theoretical structure places the primary foundation for self-regard upon the male genitals and their proposed relative superiority.

Freud considered the developmental differences of women to be plagued with failures. Tying the formation of the superego to castration anxiety deprives women of the potential to resolve the Oedipal complex. This, the superego is compromised and "a problem in theory became cast as a problem in women's development, and the problem in women's development was located in their experience of relationships" (Gilligan, 1982).

Chodorow (1974) attributed these differences between masculine and feminine personality and roles not to anatomy, but to the fact that women are largely responsible for early child care. In her hypothesis that gender identity is established by the age of three lies a theoretical basis for feminine personality to establish itself in connection and relation to other people rather than separation as must occur for the male child. If females experience themselves as like their primary caretaker, they can fuse the experience of attachment with identity formation. As boys define themselves as masculine, they must separate themselves as an opposite. Chodorow developed

the argument that "girls emerge from this period with a basis for "empathy" built into their primary definition of self in a way that boys do not. Because girls are parented by a person of same gender, they experience themselves as "less differentiated than boys, as more continuous with and related to the external object-world, and as differently oriented to their inner object-world as well" (p. 167). Consequently, self-definitions and self-perceptions are experienced differently; boys tie separation and individuation to gender identity, while girls define their gender identity through attachment.

Female identity, therefore, is considered "a developmental liability when the milestones of childhood and adolescent development in the psychological literature are markers of increasing separation" (Gilligan, 1982).

Fromm (1949) considered biological sex differences in regard to the sex act as a matter of performance. In order to achieve the sex act and satisfy his partner, the male must "prove" himself by achieving and maintaining an erection. The female need not prove anything yet is dependent for her satisfaction upon the man's desire for her. Again, this illustrates a theory built upon biological individuation of males and biological dependency upon others for the female. Fromm postulated that from this circumstance develops a character difference: the male's desire for prestige and accomplishment and the female's inclination to make herself desirable to others (Fromm, 1949).

These postulated unconscious biological influences can support a potential theory that males have more positive self-perceptions, that females have more positive self-perceptions, or that the sexes have equal bases for positive self-regard. Society's interpretations of these differences are a major factor in self-perception of inferiority or superiority. There is, according to C. Thompson (1942, 1943), a devaluation in industrialized societies of the woman's unique biological contribution. Social and economic dependency has characterized the woman's place in our society, and dependency is relegated to a low position in our value structure. The fact that men, in this regard, occupy the position of control, suggests a further reason to assume that women must have low self-regard.

Development of sex-role identity. This section speaks to the acquisition of sex role identity as it relates to the self-concept. Gender identity may have a positive or negative value placed upon it depending on stage of development. Studies indicate that female gender identity acquires a devalued status in our society beginning in adolescence and continuing into adult female roles. The studies are presented chronologically from infancy to preadolescence.

Bardwick and Douvan (1971) explored the size of discrepancy between the ideal self and the real self as being the

crucial factor in determining self-regard. With this viewpoint, one may find relativistic definition of self-regard. A woman may fashion herself out of primarily traditional feminine roles and have high self-esteem, or may encompass traditionally male roles which, according to Bardwick, carry with them worldly achievement. Incorporating valued feminine roles and valued male roles may form an ideal self which allows for personal gratification that fulfills individual needs. The female adolescent finds herself at a threshold where such choices can be overwhelmingly contradictory in light of the fact that society places many conflicting values upon possession by a female of masculine achievement-oriented characteristics. Female sensitivity to opinion, pleasing others, and understanding and helping others can detract from and interfere with the ability to act out these incorporated values. Bardwick sees the affiliative motive (feminine) as being directed toward securing and dispensing love, and the achievement motive (masculine) as being a desire to act alone with personal standards of excellence. For boys, beginning in adolescence, achievement is the primary source of self-esteem; for girls, heterosexual affiliation becomes a dominant source of self-esteem surpassing their previously valued desire for achievement.

Phyllis Katz (1979) proposed a developmental model for the acquisition of sex role. She suggested that the development of sex roles begins in infancy and continues

throughout life in three levels: (1) learning appropriate behavior for a male or female child, (2) acquiring concepts of what is appropriate for a potential male or female adult, and (3) behaving in ways deemed appropriate for male and female adults across the life span.

Sex-role identity is presumed to occur at different times depending upon the theoretical framework from which one views it. The psychoanalytic viewpoint sees the process as complete at about 5 or 6 years of age. Cognitive theorists see sex-role identity as being constant by the age of 5. However, behaviorial sex differences have been demonstrated in infancy, and work with sexually atypical children has shown that surgically changing a child's gender after age two is problematic because the child already has a psychological gender identity (Money & Hampson, 1967).

Differences in the experience of a female infant include: a physical environment that is softer (in color, objects, and the way she is handled) and a social environment that includes more verbal and physical (touching) stimulation (Rheingold & Cook, 1975; Lewis, 1972; and Lewis & Rosenblum, 1974). It is of course, impossible to discern how much the parental treatment of the infant effects infant behavior, from how much the natural infant behaviors and parental expectations effect parental behaviors (Katz, 1979).

As the child enters the preschool period (age 2-6), there arise well established sets of expectations from nursery

school teachers and parents: boys are expected to be physical, exploratory, aggressive and independent, and girls are expected to be docile, sociable, and dependent. How much of this is natural, and how much is imposed by self-fulfilling prophecy becomes even more indistinguishable by this age, and preschool environments can enhance or diminish this effect (Katz, 1979).

Katz and Zalk (1974), based on a study of the positive and negative characteristics that children attribute to same sex dolls, concluded that girls appear to be particularly proud and happy about their gender at this stage (age 2-6).

By the grade school period (age 6-12), there is not so much obvious sex-typing in the classroom, yet there appear to be more sex-related differences in socialization (Block, 1979). Boys have more trouble mastering the early school environment, which is basically a feminine institution (female teachers as role models), have different interests and activities, and both sexes prefer same-sex friends. The peer group and the media take precedence as a source of influence (Katz, 1979).

Female gender identity is not viewed as antithetical to competence during these years. Self-esteem has not been found to differ by sex during grade school years until possibly near the end of this time period when maturation may cause a more negative self-evaluation by females (Katz & Ziglar, 1967).

When sex differences emerge in measures of self-concept of math ability (as an example), females report lower estimates of their abilities than do males. These differences are found at and beyond junior high school levels, despite the fact that females perform just as well as males in math (e.g., Ernest, 1976; Fennema & Sherman, 1977; Fox, 1975; Kaminski, Erickson, Ross, & Bradfield, 1976). These studies indicate that self-concept of ability is related to such achievement behaviors as course plans and actual performance (Spence, 1983).

"Formed through a process of observing and interpreting one's own behaviors and the behaviors of others, self-concept of ability is defined as the assessment of one's own competency to perform specific tasks or to carry out role-appropriate behaviors. In the view of most authors, self-concepts of ability are key causal determinants of a variety of achievement behaviors" (Spence, 1983, p. 80).

The social dimension of self-conception. According to Carlson (1965), the stereotypic feminine and masculine roles imply social and personal orientations. Adult sex-role expectations begin to assume significance for both sexes. A social orientation (interpersonal experiences and social appraisals are important in self-conception) becomes dominant among girls and a personal orientation (self-image is immune to outside influences) emerges in the male adolescent

personality. Carlson focused on the degree of congruence between self-concept and the ideal self and concluded that self-conceptual variables are relative on this basis.

Chodorow (1974) drew a negative scenario of the traditional American middle-class housewife's ability to build self-esteem in herself or her daughters. The housewife not only does not contribute to the family's economic support but is isolated from other adult women (with whom she otherwise could have built a power base for self-esteem).

Additionally, she must prepare to accept diminishing prestige as she ages. Her only sources of self-esteem are children and vicarious sources of esteem that they can offer. These mothers tend to foster allegiance and dependence in their female children, who in turn have difficulty developing a strong sense of self. Female adolescents therefore have been receiving a devalued gender identity, which Chodorow considers a contributor to low self-esteem. Yet, Chodorow sees women's increasing access to other valued roles in our society to be an avenue to developing a sense of worth and importance.

Relatively speaking, self-concept may be of equal magnitude between the sexes, depending upon the standard to which individuals compare themselves. The female may compare herself against a lower standard, or accept much

less from herself by yielding to personal and societal expectations which give her inferior status in our society. It is possible that her value orientations cause her to choose less achievement-oriented directions and behaviors--behaviors that are not personally productive in our society, as illustrated by the following studies.

Jane Lever (1976) studied the play patterns of 181 white middle-class fifth graders. She watched the children play during school in recess and physical education and kept diaries of their self-reported activities out of school. Lever reported the following sex differences in play: boys play outside more and in large groups; they also play more competitive games and games that last longer. One of the reasons she theorized that the boys' games lasted longer was that when disputes arose, boys resolved the dispute in deference to stopping the game. Boys quarreled a lot but never interrupted the game for more than seven minutes. Girls, in contrast, tended to end the game if disputes arose. Lever commented on Piaget's assertion that boys are fascinated with legal elaboration of rules and "fair" procedures to resolve conflicts. Girls' attitudes toward rules are more tolerant according to Piaget, and they are more likely to make exceptions. Piaget considered this to be an inadequacy in moral development among girls, rather than placing value on the girls' "pragmatic" attitude toward rules.

Lever's influence from Piaget was evident in her interpretation that the male pattern of behavior was more efficacious. She felt that it met the requirements of corporate success. The implication is that if a girl wants to succeed, she will need to learn to play like a boy. Too much sensitivity and concern for the feelings of others does not have market value and can hamper success. She further concluded that boys learn organizational and management skills and the independence necessary to play with enemies and compete with friends. Girls' play, which is in smaller groups or dyads and in private places, tends to develop empathy and sensitivity but impedes the development of achievement-oriented behavior.

Matina Horner (1972) found women to have anxiety about competitive achievement. Previously, from his studies of men's TAT responses, McClellan, Atkinson, Clark, & Lowell (1953) found achievement motivation to have two components: a motive to approach success, and a motive to avoid failure. Horner found a third component in women's responses: to avoid success or fear success, presumably because of a perceived conflict between success and femininity. Many women apparently perceive negative consequences to success, especially when it is against men, such as potential social rejection or loss of femininity (Horner, 1968). Georgia Sassen (1980) pointed out that Horner found success anxiety to be present in women only in directly competitive

achievement where one person's success meant another person's failure.

In a survey of studies by Terman and Tyler (1954) which ranged from 1920 to 1952, it was found that there existed characteristically feminine traits of "absorbing interest in persons and personal relationships. That in fact a sex difference exists in this respect is indicated by data from subjects over a wide range of ages" (P. 1095).

Wylie (1979) noted numerous studies that support sex differences in interests, values, attitudes, need for affiliation, social orientation, and other factors. "Both theory and research, then, agree that the social dimension of personality, broadly defined, is more salient in females than males... But, in narrowing down the field to the social dimension of self-conception, one finds few theories concerning the variable of sex" (p. 316).

In summary, to this point, there has been no unequivocal proof of sex differences in self-conception. Self-concept can attach itself to different variables depending upon one's value system. Values are acquired through socialization processes. Females are socialized differently from males; therefore, one would expect females to hold different value systems from males.

Gender Differences in Values

Kohlberg (1958, 1981) first derived his theories of moral development from the work of Piaget. Piaget (1932) structured his theories of moral development on the development of boys. Kohlberg's six stages of moral judgement are based empirically on a study of 84 adolescent boys. He followed their development for over 20 years. Rarely did subjects in Kohlberg's sample reach his sixth stage of moral development. The stage that most exemplifies the moral reasoning of women as put forth in this paper is a state which conceives of morality in interpersonal terms placing value on helping and pleasing others. This stage is at the third level of moral development in Kohlberg's scheme.

Kohlberg and Kramer (1969) proposed that women would only reach higher stages if they were to become involved in the world of male activity outside the home. Then they might learn to subordinate relationships to rules (stage four) and rules to universal principles of justice (stages five and six), thus clearly indicating that women are perceived by Kohlberg to be deficient in moral development.

Gilligan (1982) viewed Freud's Piaget's and Kohlberg's definitions of maturity (emphasis on individuation) as a conception that highlights competing rights and formal and abstract thinking. She conceived of a mode of thinking that is "contextual and narrative" centering moral development "around the understanding of responsibility and relationships"

as a feminine corollary to the morality of fairness "tying moral development to the understanding of rights and rules" (p. 19). Kohlberg emphasized separation rather than connection and considers the individual rather than the relationship as primary.

Again, in the writings of Kohlberg as with other theorists, the theme is seen that in order to succeed in a male-dominated society a female must "think like a man". Though she may not naturally think like a man, at least she must develop the capacity to also view the world as a man would, or in other words to develop an androgynous thinking pattern (understanding and exercising the most productive thinking pattern to succeed in a goal, while maintaining personal feminine values).

Gilligan conceives of an alternative conception of maturity:

> Thus it becomes clear why a morality of rights and noninterference may appear frightening to women in its potential justification of indifference and unconcern. At the same time, it becomes clear why, from a male perspective, a morality of responsibility appears inconclusive and diffuse, given its insistent contextual relativism... Given the differences in women's conceptions of self and morality, women bring to the life cycle a different point of view and order human experiences in terms of different priorities... Only when life-cycle theorists divide their attention and begin to live with women as they have lived

> with men will their vision encompass the experience of both sexes and their theories become correspondingly more fertile (p. 72).

Here it is seen that theories of human development might be established that consider differences without scaling differences from better to worse. If divergent thinking processes are in existence in male and female development, they must be taken into account in theory building. Gender differences in values and moral perceptions will affect self-conception which in turn determines important choices that begin to take form in adolescence. Self-perception of future roles are crystallizing in adolescent years, which makes this period a crucial time to explore, recognize, and understand personal value systems and the character of career development schemes.

The divergent thinking processes of females as observed by Gilligan and others are most likely acting also upon an adolescent female's self-conception of her future role in society. Perhaps she is developing into adulthood with emerging perceptions of self and others and relations to others that automatically place her in a low status position in our society. If she is aware of her differences in needs and value structures and

aware of how her unique perceptions interact in a male dominated society, she can make more effective choices.

Awareness, education, and clarification of gender identity seem to be important variables in educating to success oriented behaviors. A given female adolescent may have equal success motivation to a male, but her value structure may put her at a disadvantage if the world of work is structured on strict rules of fair play and autonomy and other masculine values. It is probably safe to say that the world of work is structured on masculine values, since most businesses, bureaucracies, and other work places are controlled by men. Provided that a woman has an interest in pursuing success in this arena, she may need to change her value structure.

It is most relevant, therefore, to explore the value structures and self-perceptions (in regard to occupational image) that now exist among female and male adolescents and how they relate to level of occupational aspiration.

Gender Differences in Aspiration Level as Influenced by Values

Sex Stereotyping of Careers as it Relates to Occupational Aspirations

Several studies have shown that sex stereotyping of careers begins early (Pollis & Doyle, 1972; Vondrachek &

Kirchner, 1974; Etaugh & Brown, 1975; Nichols, 1975; Tibbetz, 1975; Williams, Bennett & Rest, 1975).

One study by Knell and Winer (1979) indicated that boys (aged 3 to 5.7) are more prone to stereotype than girls, but girls' perceptions are more susceptible to change through hearing stories with stereotypical models. They found that well-established stereotypes were not easily changed by reading materials, but that the most potential for effect from this media did occur at younger ages.

Since it is commonly accepted that most children spend many hours in front of the television, researchers have investigated the possible effect of TV female models who are engaged in nontraditional occupations. O'Bryant and Corder-Bolz (1978) found that viewing females in nontraditional occupations on TV may alter children's stereotypic beliefs. Prime-time television communicates the message "that there are more men around, that they are dominant, authoritative, and competent" ("Women on Words and Images", 1975, p. 3). Women on prime-time television hold traditional jobs, are dependent, and have more negative characteristics. These stereotypes are even more explicit in commercials ("Women on Words and Images", 1975).

Boys and girls have different patterns of career aspirations, with girls choosing a smaller range of occupations than boys (Siegel, 1973; Looft, 1971). As children become

older, they are even more likely to stereotype occupations (Shepherd and Hess, 1975). Thus, by the time a girl is first faced with an opportunity to make a career-related decision, she has long ago internalized appropriate cultural expectations and established the concomitant self-evaluations. She has played with toys that have reinforced these expectations and has had a life-long history of avoiding nontraditional sex-role objects (Vieira & Miller, 1978). Teglasi (1981), seeing the relationship between choice of toys and career aspirations, hypothesized that the process by which toys are stereotyped, evaluated, and selected is highly similar to occupational stereotyping. He found that children from kindergarten to sixth grade choose sex-appropriate toys for boys and girls. Career choices are already sex-typed in kindergarten, but the degree of sex typing increases with advancing grade levels. He also found that different values are placed on toys and occupations depending on whether they are considered masculine or feminine; the "best" jobs and toys corresponded more closely to the masculine than to the feminine stereotype. "The discrepancy between the 'best' toys and the toys selected is identical to the pattern found for occupations and suggests that toys and activities may be downward extensions of occupations and are concomitants of acquired sex roles." Teglasi postulated that his findings in regard to toys may also suggest a general undervaluing of females, so that anything associated

with females becomes less valued. He saw this as being consistent with the findings of Touhey (1974). This study found that a field in which women predominate holds less prestige that one in which men predominate. Touhey found that a formerly prestigious career is viewed as less desirable when raters are led to believe that the proportion of women will increase in that field. Student interest in an occupation can be altered by suggestions that males or females will be dominant in an occupation. In one study where male college students were told that women will constitute 50 to 60 percent of all attorneys within the next ten to fifteen years, their interest in law as an occupation became significantly less (Collins, Reardon, & Waters, 1980).

Teglasi (1981) separated the content of the stereotype from its value. He feels that if boys and girls considered their activities and toys to be equally valued, the negative self-perceptions of females would be minimized and career counseling at a later stage could be more effective. It is not just a problem of the stereotypes that exist, but also the inequity of the negative values associated with those stereotypes. "Unfortunately, children learn both the stereotype and the concomitant value judgements at an early age which may provide the basis for internal barriers against women's entering high status occupations" (p. 193).

Adolescence is when such stereotyping begins to crystallize into its adult form. Frost and Diamond (1979) found that children in fourth through sixth grades stereotyped children's jobs such as babysitting and lawnmowing and also sex-stereotyped adult occupations. Females in adolescence also demonstrate that they select from very limited occupational possibilities and often on a sex-typed basis (Brito & Jusenius, 1978). Research on adolescents shows that females have lower occupational expectations than males, considered to be a consequence of traditional sex-role socialization (Rosen & Aneshesel, 1978). Barnett (1975) studied 1500 male and 1000 female children from ages 9 to 17. From a list of 24 occupations they were to list two most liked and two least liked. He computed correlations between these preferences and occupational prestige and age. Occupational prestige and preference were more highly correlated for males than females of all ages. Females indicated aversion for prestige jobs.

Crites (1978) reports that longitudinal research indicates greater emergence of sex differences during high school years. Starting at the seventh grade, females had reliably higher mean scores on the attitude scale of the Vocational Development Inventory. The process of career choice for females matured at a greater rate than that of males.

Heilman (1979) found that the sexual composition of an occupation influenced high school females' estimation of their future success in that occupation. They expressed more interest in a particular male-dominated career and estimated their potential success as being greater in that career when they were led to believe that sex ratios in the career would be more balanced in the future. The author felt that this is a factor in explaining why women continue to choose low status careers.

Pedro, Wolleat, & Fennema (1980) found that ninth and tenth grade female students, though achieving as well as their male counterparts, were planning to study less mathematics than their male classmates. Among this group of 722 students, including 400 females, it was found that female students were still selecting stereotypical female career areas that require little mathematics and provided very minimal extrinsic rewards. The authors commented that the female students have thus limited their options for later occupational plans in this society where emerging occupations are those in high technology.

Girls are usually "set" into a career choice by age 15 as a product of being limited to stereotyped choices. Since male identity is more typically tied to career than female identity, girls have a different identity achievement problem. Girls continue to get signals from society that

the career development of males takes priority, because they are the traditional breadwinners (Herr & Cramer, 1984). Herr and Cramer (1984) stated that strategies to respond to the needs of female students "must be mounted no later than the junior high school period. To wait diminishes the likelihood that career development can be influenced for females in optimum ways" (p. 239).

Social Influences as They Relate to Values and Occupational Aspiration of Females

Rand and Miller (1972) conducted a cross-sectional comparison of women at three educational levels. There were 20 females from junior high, senior high, and college levels. The desire for marriage was an important career variable for the junior high girls and by the time they were in college, it had become an important part of their plans. Almost all plans included work, marriage, and family responsibilities. At all levels, stereotyped female occupations were chosen.

Horner's fear-of-success construct has been examined in several studies in the career development area. One such study was conducted by Esposito (1977), who studied 221 male and female white and black college freshmen with respect to vocational choices and "motive to avoid success".

Significant gender differences were found. Females with high motives to avoid success engaged in much daydreaming about traditional occupations.

Sedney and Turner (1975) used "Compensatory" and "Enrichment" models of career orientation. They studied the affiliation behaviors, need for achievement through affiliations, and career orientation to find most support for their "Enrichment" model, which suggested that a woman's high achievement need would lead to high career orientation and low heterosexual orientation. Women with favorable self-esteem scores were found to be higher in achievement need, power need, and affiliation needs in a study by Bedeian and Touliatos (1978). It was suggested in this study that self-esteem is related to work motives.

Parental influences on female self-perceptions and work values cannot be overlooked. Sorensen and Winters (1975) reviewed parental influences on female career development and concluded that the career perceptions and attitudes of girls are influenced by identification with their mothers and knowledge of their mother's work history. Burlin (1976) found a significant relationship between daughter's occupational aspiration and father's education as well as a relationship between mother's occupational status and daughter's occupational aspiration. The encouragement and support of both mother and father had been shown to be

of most importance for women entering nontraditional careers (Auster & Auster, 1981).

Other role models are seen serving as important influences in career development in addition to parents. Among them are teachers, friends, siblings, mentors, and other adults (Herr & Cramer, 1984).

Several studies indicate the important influence of social factors in the decision formation of female adolescents. Thomas and Stewart (1971) had school counselors listen to tapes of boys and girls talking about themselves. Counselors perceived girls with "deviant" plans as being in need of counseling, though female counselors were more accepting of this deviance.

Hawley (1971) found females to be influenced by what males considered to be "appropriate female behavior". Women perceived male opinions differently, according to their own status in career (those in "female" versus "male" careers). Those in traditionally "female" careers viewed men as having strong ideas about proper career roles for women. Hawley concluded that the way females see male expectations and opinions greatly influences female career development.

Collette Dowling, in her book, the Cinderella Complex (1981), summarizes numerous interviews with women who are caught in a "gender limbo". Women often are waiting for the "knight in shining armor" or other form of rescue

which will take care of them. While males are taught to become independent, females are taught that if they wait long enough, some external force will transform their lives and relieve them of the responsibility of planning for themselves. She defines the "Cinderella Complex" as "personal psychological dependency--the deep wish to be taken care of by others--is the chief force holding women down today." She notes that IQ bears a close relationship to accomplishment among men and essentially no relationship to accomplishment among women. She proposes a theory of why women have affiliative needs: that from babyhood, women are taught not to trust themselves. They are instilled with a deepseated doubt in their own competence which is "excessive and pathological" (Dowling, 1981).

Achievement Motivation Among Females

One facet of female achievement behavior on which there has been speculation and some research for support has been a possible cyclical pattern in achievement motivation in women. Baruch (1967) found that, among her subjects who were formerly college students, there was an increase in achievement motivation 10 to 15 years after their marriage. Such data may support the idea that the need for achievement is suppressed during the periods of early marriage and child-rearing and

re-emerges later in life when the affiliative needs have been satisfied (Bardwick, 1971). Boys tend to underachieve in early childhood and girls begin to underachieve in adolescence when competing drives for heterosexual affiliation interfere with achievement motivation (Bardwick, 1972; Stein & Bailey, 1973).

It is generally agreed that sex differences exist, ranging from differences in activity level and skin conductance in newborns to behaviorial differences in aggression and dependency in children and adults (Bardwick, 1971; Mussen, Conger, & Kagan, 1969). Achievement motivation has been extensively studied, and the theory that has been developed to explain it has been based primarily on males. These theories do not apply very well to females (Stein & Bailey, 1973). The study of female career patterns has been "a largely neglected area of research" (Crites, 1969, p. 147).

Herr and Cramer (1984) stated that "There is presently no clear theory relating to the career development and choice of women." Zytowski (1969), Rose & Elton (1971), Fitzgerald & Crites (1980) have proposed a need for a separate theory of career development for females. Fitzgerald and Crites (1980) proposed that the counselor who does not develop an appropriate theory, and who allows young women to ignore their potential and opt for low level or no career, believing

they are allowing a "free choice", are simply ignoring reality. Bem and Bem (1973) have remarked that "society spends 21 years marking the woman's ballot for her. It then feels fairly secure in allowing her to cast it for herself" (p. 92). Herr and Cramer (1984) suggested a theory of career development and career choice applicable to both sexes that could weight factors according to gender and according to other variables, particularly since there is no evidence that females have less desire to achieve.

Westervelt (1973) has summarized some trends in demographic changes that are occurring for educated women: The percentage of unmarried women from 20 to 24 and the average age of marriage are increasing rapidly. The birth rate is falling; 1971 had the lowest rate since 1820. The number of women over 30 who are enrolled in higher education courses has doubled during the past ten years, and the number of women in the work force has increased. Women have continued to remain single longer, have fewer children, work when their children are young, and return to work or school as their family responsibilities ease.

Women are equally educated (both sexes completed a median of 12.7 years of schooling), comprise 43 percent of the work force (1981), and maintain without help from a spouse about one out of six families, yet their average

salary is 59 percent of the average man's earnings. Since 66 percent of the women in the labor force work out of economic need (due to being divorced, separated, or widowed in many cases), it appears that adolescent females need to develop a more realistic viewpoint of their futures and will need to develop equally serious plans for career choices (statistics from Women's Bureau of the United States Department of Labor, 1982).

Hawley pointed out that even though occupational segregation is slowly diminishing, over one-half of the women in the United States are in "clerical, operative, or service positions while professional women are concentrated in the areas of teaching and nursing" (1980, p. 47). As has been demonstrated by most of the research cited in this paper, females consistently orient to lower paying jobs. It appears that young females continue to view their future selves in an occupation that has low pay and all the things that go with low pay, such as low status, few fringe benefits, fewer avenues for change or advancement, and less challenge and opportunity for fulfillment.

The writer has been unable to find research aimed directly at isolating the reasons why females continue to choose jobs that pay low salaries; however, three factors in the research cited earlier seem to be prevalent:

devaluing of "female" jobs, low priority of monetary rewards in the female value structure, and a low self-concept in regard to perceived potential of success in or access to a high-paying field of endeavor.

Some of the career orientation research has supported the idea that women who view themselves in "nontraditional roles" (meaning being career oriented) are psychologically healthier than their more traditional counterparts. Helson (1972) has presented evidence that refutes some of the notions of older research which say that career oriented women are deviant and less well-adjusted. Several authors (Bardwick, 1971; Broverman et al., 1972; Mednick & Tangri, 1972) have pointed out that career oriented women do not necessarily reject the feminine role but instead think in terms of dual role-- marriage plus a career commitment.

The Relationship of Values and Occupational Aspiration Levels

Lewis (1968) made several generalizations about sex differences in career behavior: that girls make vocational choices earlier and choose people-oriented jobs and service fields rather than professional fields; that girls consider job characteristics more than boys and are less likely to value pay and advancement in job selection than boys.

Wijting, Arnold, & Conrad (1977) studied work values of 1402 boys and girls in grades 6, 9, 10, and 12. They reported that for girls, high values were placed on activity, involvement, and pride in one's work, and that there was devaluation of extrinsic rewards such as money and social status. Boys devalued the intrinsic rewards of work and placed positive value on money and social status. They reported crystallizations of these values in grades 9 through 12.

Adolescent females may simply be placing a lower value on monetary rewards. Tittle (1981) added verification to theories of female development as well as adding evidence to earlier studies of female value structures (Lewis, 1968; Wijting et al., 1977) when she found that male adolescents placed a higher occupational value on the variables of high income and leadership, while females placed higher values on helping others. She found her data to be consistent with the findings of Norris, Katz, & Chapman (1978) who found females to value helping others, being in a field of interest, and early entry (no lengthy education) as important, where males again valued high income and leadership more strongly as well as independence.

The "male" socialized values of independence and leadership showed up as salient features for adolescent females with high aspiration (Tittle, 1981).

Another variable that may affect orientation to low-paying jobs may be the female adolescent's lack of knowledge that her chosen field of endeavor does pay much less than a typically "male" job will pay. The accumulated research evidence indicates that females choose early and stick with their early occupational choice (Lewis, 1968; Crites, 1978; Rathburn, 1971). Since their choices are limited from sex role stereotyping and socialization processes (Pollis & Doyle, 1972; Etaugh & Brown, 1975; Looft, 1971; Nichols, 1975; and Tibbetz, 1975), this early choosing lends credence to the hypothesis that girls are choosing out of social pressures without benefit of knowledge of the accompanying low status and low pay of their occupational choice. Early choices may not be informed choices, particularly when taking into account the limited number of options young females see as being feasible for themselves. Looft (1971) found that 6 to 8 - year-old females saw themselves in a very limited number of occupations. When asked what they wanted to be when they grew up, girls mentioned eight occupational categories, while boys mentioned 18. Seventy-five percent of the girls viewed themselves as either a teacher or a nurse -- traditionally

"female" jobs with relatively low pay.

Biological "imperatives" and socialization for adult roles interfere in potential advancement and achievement of adolescent females as evidenced by Tittle's finding (1981) in her studies of 11th grade students: males appear to focus exclusively on occupational values, while females tend to incorporate marriage and parenthood values into all of their decision making and valuing processes.

Biological factors for women become the most prominent source of influence beginning in adolescence (Katz, 1979) and are unimportant after approximately age 35 when affiliative needs have been met. At middle adulthood (as theorized by P. Katz), women are finally ready to develop a perhaps previously neglected vocational interest.

Of the many factors proposed in this review, it can be seen that there is a potentially complex interaction of variables contributing to the development of aspiration level. It is the intent of this study to isolate and examine the influence of work values and self-concept of aspiration level among adolescent females and males. Students who are motivated and achieving will be of interest in

this study, in order to focus particularly on the phenomenon of low aspiration among high-achieving females.

CHAPTER III

METHODOLOGY

This chapter will describe research procedures used in this study. Topics covered will include description of students and setting, the instruments that were used, the research process, and the statistical procedures employed in the study.

Description of Students and Setting

Two hundred and forty-four students enrolled in the eighth grade at Ledford Junior High School, a grade six through eight school in the Davidson County, North Carolina school system, were screened to obtain participants.

For the purpose of this study, "high achievers" were defined as those students who performed above average among their classmates. This selection was achieved by identifying students who have a "B" average or above. Work performed at "C" level is defined as average in this school system as it is in most school districts. Students who demonstrated high achievement ability on the California Achievement Test (CAT) were also selected. Again, "above average" was the designation to describe a high achiever; this was established by choosing those students who scored above the 50th percentile on

national norms. All students in grade eight who met either or both criteria were included in the study. This selection emcompassed 76 percent of the population in the eighth grade group, or 183 students. High as opposed to low aspiration among these students was determined by simply asking them their choice for future occupation "as they see it at this point in time." Their occupational choices were scaled on four dimensions of aspirational level. (These scales are detailed in section IV of the "instruments" section of this chapter.)

The community in which this school is located is rural and takes in the suburbs of three surrounding cities (High Point, Winston-Salem and Thomasville). A wide range of socioeconomic levels are represented by the study group. Racial composition among the eighth grade group is primarily white (241 are white, 1 is American Indian, and 2 are black). Educational levels of fathers for this group are as follows: 5 students reported fathers with an education of eighth grade or less, 29 reported eighth grade but not high school graduates, 107 reported that their fathers had completed high school, and 99 reported some education after high school. The mean score on the total CAT battery for the entire eighth grade group is at the 72nd percentile nationally, which indicates the

rather high achievement level of this group compared to the norm group for the CAT.

Thirty-one of the students selected by the process described earlier were eliminated from the final analysis because their occupational choice was a fantasy occupation and could not be categorized on the three dimensions used to define level of aspiration in this study. Of these 31 subjects, 8 were female, and 23 were male. Males were slightly older in the selected study group than females (mean age males = 13.264, females = 13.071, $p = .003$).

Males listed 31 different occupations; females listed 43 different occupations. The number of occupations listed was proportionately similar between the sexes (males $\frac{31}{53} = .5849$; females $\frac{43}{99} = .4343$), a result different from the previous findings of Siegal (1973) and Looft (1978) that females report much less variety in occupational choices. A listing of the occupational choices of these students can be found in Appendix B.

A questionnaire item (item 8 of Appendix F), appearing after the request for the students to list their occupational choice, listed several variables judged by four junior high school counselors and two teachers to be "sex-role socialized" reasons for not choosing certain careers. An informal inspection of answers to this question revealed no obvious differences among this

group on "socialized" reasons for job choice except that males were less likely to give sex-atypical reasons than females (e.g., one percent of males indicated "males don't usually do this" as an obstacle to acquiring the job of his choice. Eleven percent of females indicated "females don't usually do this" as an obstacle). Also, a greater number of females indicated that they "would rather concentrate more on family, marriage, and children". Results from this questionnaire item are presented in Appendix C.

Upon being asked a question concerning whether males and females had equal opportunity to acquire a high paying, high prestige job (item 11 of questionnaire), 112 students of this group answered "yes" (61.2 percent) and 71 answered "no" (38.8 percent).

INSTRUMENTS

Values

Values relating to work were measured by Donald Super's Work Values Inventory (WVI), which originated as a 210-item, paired-comparison instrument designed to measure 15 different work values and developed for use in the Career Pattern Study (Super, Crites, Hummel,

Moser, Overstreet, & Warnath, 1957). It consisted of two parts, each having 105 paired comparisons. The following are the values proposed to be measured by the instrument:

1. intellectual stimulation
2. job achievement
3. way of life
4. economic returns
5. altruism
6. creativity
7. relationship with associates
8. security
9. prestige
10. management of others
11. variety
12. esthetics
13. independence
14. supervisory relations
15. physical surroundings

Factor analysis of the original WVI suggested six second-order dimensions (rather than the structural four

into which the fifteen values were originally organized). O'Connor and Kinnane (1961) identified the following six structural values:

1. Material Success (prestige, security, economic returns)
2. Altruism (social, creativity, management, supervisory relations)
3. Conditions and Associates (surroundings, associates, independence)
4. Heuristic Creative (intellectual stimulation, creativity, aesthetic)
5. Achievement Prestige (achievement, prestige, independence, way of life)
6. Independence, Variety (independence, variety, way of life)

In developing this test, Super made use of Ginzberg's classification of values (Ginzberg, Ginzberg, Axelrod, & Herma, 1951), which suggests that work satisfactions or values fall into three distinct types: rewards (monetary and prestige), concomitants (social and environmental), and intrinsic satisfactions (pleasure in the activity and in the accomplishment of specific ends). After analyzing this potential categorization, Super (1962) found there were not enough significant positive correlations to justify such a hypothesis. "Apparently the value structure of individuals

cuts across Ginzberg's trichotomy, so that people are best characterized as seeking some intrinsic values, certain rewards, and particular concomitant satisfactions" (p. 27).

O'Hara and Tiedeman (1959) studied the accuracy of self-concept with increasing age using the WVI. They found that self-estimated work values increased in agreement with measured work values over high school years more sharply than ability and social class, but not as well as interest or general values (Allport-Vernon-Lindzey Study of Values). Values that maintained considerable discrepancy were mastery (correlated 0.07 with its self-estimate) and supervision (0.11). The highest correlations were creative (0.50) and social welfare (0.55).

O'Connor and Kinnane (1969) used factor analysis in an attempt to verify Ginzberg's (1951) three types of work-derived satisfactions and again found six factors. This study resulted in new items being written and integrated into the factor scales to form a modified version of the WVI consisting of eighty-nine items keyed on one of six homogeneous scales. Kinnane and Suziedelis (1962), Kinnane and Pable (1962) and Kinnane and Gaubinger (1963) have used the modified WVI to establish its relationship to family variables, interests, and personal values.

In the Career Pattern Study (Super & Overstreet, 1960), the WVI was examined for relationships to vocational maturity.

No significant association was found, but the study did only include ninth grade boys. Super (1962) studied the same data relating the fifteen WVI scales to several measures of intelligence, interest, adjustment, and achievement. From the centroid factor analysis of a 40 by 40 matrix emerged ten factors, of which four were purely values, two were a combination of interests and values, and the others appeared to be unrelated to value constructs.

Ivey (1963), correlating the WVI with Kuder Interest scales, concluded that interests determine direction of career, but that values affect job satisfaction.

Kinnane and Gaubinger (1963) based their hypothesis on Super's theory of vocational development (1962) which suggests that the nonvocational nature of the widely used Allport-Vernon-Lindzey Study of Values (AVL) items makes them less subject to choice on the basis of vocational stereotypes and more on their own merits than occupational items such as on the Kuder Preference Record and the Strong Vocational Interest Blank. They hypothesized that Super's theory (1957) that the value system of the self-concept is a significant variable in the selection of a career (i.e. that life values find expression in work values) is valid. They correlated AVL values with like values on the WVI and of their five hypotheses, found that all relationships

between life values and work values yielded significant positive correlations.

Gribbons and Lohnes (1965) studied vocational value hierarchies of 111 boys and girls in eighth, tenth, and twelfth grades, and found a maturity of vocational self-concepts early in the eighthgrade, though shifts did occur over the five-year period. They contended that similarities in boys' and girls' values outweighed differences in employment of vocational value categories at this stage

Super's most recently (1970) revised version of the WVI (Form A) uses three items to measure each of the fifteen values. These 45 items are each rated on a five-point scale by respondents. The scores can therefore range from 3 to 15 on each scale and are normative rather than ipsative. Correlations (Hendrix & Super, 1968) of new items were done with the original items, based on 99 tenth grade students. The smallest correlation was 0.43 and a median correlation of 0.65 was observed. Correlations of greater than 0.70 occurred in one third of the cases. Substantial reliability was demonstrated in the revised form. The differences found between mean scores for males and females in this study were not significant when tested statistically, but the apparent differences were consistent with related findings: girls appear to exhibit higher scores for Altruism and lower scores for Economic Returns than do boys. Hendrix and Super, in

developing factor dimensions and reliability of this modified form, found four separate dimensions underlying the WVI for males, and at least three distinct dimensions exhibited for females. The three factors that appeared similar between sexes were called in this study: situational job values, instrinsic job values, and occupational self-expression activities. For males, Way of Life was fixed with the extrinsic dimension whereas for females Way of Life was associated with the intrinsic dimension or separates itself entirely into a unique factor. "This seems logical since a man's job is his 'Way of Life', his job occupying a much greater proportion of his time and attention. For women, Way of Life is not so strongly associated with a job, but may indeed be a separate dimension" (Hendrix and Super, 1968, p. 274). Thus, differences between males and females have previously been found in Way of Life, Associates, Economic Return, and Altruism. The following are brief operational definitions of the values purported to be measured by the WVI (Super, 1970, p. 8-10).

Altruism:this work value, or goal, is present in "work which enables one to contribute to the welfare of others." Altruism assesses social service values and interests.

Esthetic: a value inherent in "work which permits one to make beautiful things and to contribute beauty to the world."

Creativity: a value associated with "work which permits one to invent new things, design new products, or develop new ideas."

Intellectual Stimulation: associated with "work which provides opportunity for independent thinking and for learning how and why things work."

Achievement: a value associated with "work which gives one a feeling of accomplishment in doing a job well." Achievement appears to assess a liking for work with visible, tangible, results.

Independence: associated with "work which permits one to work in his own way, as fast or as slowly as he wishes."

Prestige: associated with "work which gives one standing in the eyes of others and evokes respect."

Management: associated with "work which permits one to plan and lay out work for others to do."

Economic Returns: A value or goal associated with "work which pays well and enables one to have the things he wants."

Security: associated with "work which provides one with certainty of having a job even in hard times."

Surroundings: a value associated with "work which is carried out under pleasant conditions - not too hot or too cold, noisy, dirty, etc."

Supervisory Relations: a value associated with "work which is carried out under a supervisor who is fair and with whom one can get along."

Associates: a value characterized by "work which brings one into contact with fellow workers whom he likes."

Way of Life: associated with the kind of work that "permits one to live the kind of life he chooses and to be the type of person he wishes to be."

Variety: associated with "work that provides an opportunity to do different types of jobs."

Self-Concept

The Piers-Harris Children's Self-Concept Scale (P-H) is an 80 item inventory which contains simple declarative statements to which the subject responds by circling "yes" or "no". (Items on the test, listed by cluster scales, can be examined in Appendix D.) Jersild (1952) compiled children's descriptions of things they liked and disliked about themselves. The authors of the Piers-Harris took inventory items from these lists. They attempted to build in content validity by defining the universe from which the items were drawn (Piers, 1969, p.5). The instrument was designed primarily for research and was standardized on a cross section of third-, sixth, and tenth-grade students. It was subjected to item analysis. The manual states that reliability is within the range from .78 to .93, using the Kuder-Richardson formula; the Spearman-Brown odd-even formula has yielded reliability coefficients of .90 and .87 with sixth- and tenth-grade students. When half of the subjects in the standardization sample were retested with the original 140-item inventory four months after the first testing, coefficients of .72, .71, and .72 were obtained (Piers, 1984, p.4). The present 80-item inventory, when re-administered to 244 fifth-graders after two months and again after four months, showed a stability coefficient of .77 for each time period. The Piers-Harris, according to the authors, is "judged to have good internal consistency and

adequate temporal stability" (Piers, 1984, p. 5). A more recent study (Shavelson & Bolus, 1982) involving a test-retest interval of five months, obtained a reliability coefficient of .81 for a group of white, upper-class, seventh and eighth graders. "Thus,temporal stability estimates generally support the results reported with the standardization sample" (Piers, 1984, p. 54). Of the self-concept instruments studied by Wylie (1974), the Piers-Harris appears to be the most psychometrically sound and has been used in a large number of research studies.

The Piers-Harris yields a total self-concept score and provides scores on the following subscales: Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Popularity, and Happiness and Satisfaction. Most of the research to date has used total scores, consequently leaving little information about the specific subscales. These "cluster" scales were used in the present study.

The cluster scales were derived empirically through extensive factor analysis (Piers, 1984). An intercorrelation matrix of cluster scores and total score for the sample used in this study appears in Appendix H. This indicates the degree of the relationship among the scales. Correlations range from .15 to .74 indicating a moderate degree of interrelatedness among scales. There are a number of shared items which contribute to the size of the intercorrelations. The following are brief operational definitions

for the cluster scales (Piers, 1984, p. 38):

Behavior: This 16-item cluster reflects the extent to which the child admits or denies problematic behaviors.

Intellectual and School Status: This cluster of 17 items reflects the child's self-assessment of his or her abilities with respect to intellectual and academic tasks, including general satisfaction with school and future expectations.

Physical Appearance and Attributes: This third scale , consisting of 13 items, reflects the child's attitudes concerning his or her physical characteristics, as well as attributes such as leadership and the ability to express ideas.

Anxiety: This group of 14 items reflects general emotional disturbance and dysphoric mood. Individual items tap a variety of specific emotions including worry, nervousness, shyness, sadness, fear, and a general feeling of being left out of things.

Popularity: The 12 items in this cluster reflect the child's evaluation of his or her popularity with classmates, being chosen for games, and ability to make friends.

Happiness and Satisfaction: These 10 items tap a general feeling of being a happy person and easy to get along with, and feeling generally satisfied with life.

Questionnaire

The student questionnaire collected information about the other variables to be explored. Students were asked for their perceptions of how good a student they think they are. Their perceptions of desired level of education were measured by a seven-level listing of amount of education. They were asked for their job choice and if there were any obstacles they saw in acquiring this goal.

Self-perception of opportunity for access to their job choice was rated on a number line scaled from 1 to 9. They were asked to rate their chance to get a high-paying job, and their perception of their chance to get a high-prestige job. They were also asked if they thought a man and a woman with equal qualifications had equal opportunity to get a high-paying job with prestige.

One other question designed to tap self-perceptions of their occupational images of themselves as an adult asked how much money they thought they will be making when they are 35 years old.

A pie graph was used to allow students to represent the portions of their adult lives they saw as being devoted to marriage, work, children, and other things, as a way to measure their amount of commitment to work. Students were asked to pretend that the circle represented their lives in their future as an adult and to divide it like pieces of a pie into four parts: marriage, work, children, and other (see question 13 in Appendix F).

Instruments for Coding of Occupational Choices

Prestige of Occupation was coded using the National Opinion Research Center (NORC) prestige scale which was developed at NORC in 1963-1965 by Hodge, Siegal, and Rossi and described in Linn (1976, pp. 415 to 427).

The Economic Returns of an occupation was established by using the projected salary as listed in the Occupational Outlook Handbook (1984).

Gender Dominance in an occupation was based on the proportion of males in a given occupation according to the 1982 Bureau of Census (Statistical Abstract of the U. S., 1984, 104th Edition). For example, if the occupation was 80 percent male, the male dominance index was 80.

Procedures

The questionnaire was refined by interviews with five students who would not be subjects in the study. Each student's suqgestions and questions were weighed; changes in wording were made until they felt that the question clearly measured what the researcher had expressed as her intent of what was to be measured. Parental permission was obtained, and these interviews were taped.

Permission to carry out a pilot study at another Junior High School in Davidson County was obtained from the Superintendent of Schools and the principal of the school. Permission letters were sent home with students. All letters were siqned by parents and returned to the school counselor (A copy of the letter appears in Appendix A.)

The three instruments were administered to seventh and eighth grade pilot groups. The two groups consisted of advanced classes (chosen by a combination of CAT scores, grades, and teacher opinion). Instruments were administered within the regular classroom setting and following the students' normal schedules. One class period was required. Students were instructed to ask questions freely during these sessions in order to point out to the administrator any possible areas in the instruments or instructions that needed further clarification. Instruments were administered

in the following order: Piers-Harris, WVI, and Student Questionnaire. The Piers-Harris was administered first due to its clear instructions and easy reading level, the WVI was administered next due to its similarity in format to the Piers-Harris. This order was retained for the actual study.

The questionnaire provoked the most requests for clarification and appeared to take further thought and consideration. Only two requests for clarification were made by the seventh grade class, both having to do with the procedure for marking answers. Five questions were asked by the eighth grade class: three concerned marking procedures; two asked for further clarification of the pie graph. Though questions did come up about the pie graph, it was decided that this question would not be changed since only two students out of 69 expressed any difficulty with it, and no noticeable problems appeared in this question upon inspection of the completed responses.

The same parental permission letters were given to the study group as were given to the pilot group. With the help of the language arts teachers, the researcher was able to receive all of the letters back with parental signatures as required for participation in the study.

Again, one class period was required for each administration, and instruments were given during the regular language arts period for each group. Students were informed that there would be no time limits set for completion of the instruments. However, no more than 50 minutes were required for any of the students to complete the instruments (this time period was found to be sufficient during the pilot study). At the end of each test session, the individual instruments were inspected; five students of the total group neglected to fill out the backs of one or more of the sheets. These students were asked to complete what they had overlooked. Three students absent on the day of administration completed the instruments upon their return.

Instruments were administered to six intact classes. One class was designated by state guidelines as academically talented (AT), and five were regular classes. Two classes in the eighth grade at this school were remedial groups in language arts and were not given the instruments for this study. The school records of all participating students were screened using the criteria stated earlier for students who would be considered "high achievers". This process eliminated thirteen subjects from the original number who took the instruments, resulting in a total of 183 subjects. Thirty-one of these 183 subjects, as stated earlier, were removed because their choice of a fantasy

occupation (such as pro-football player, actor, or other occupation not listed in the Dictionary of Occupational Titles) could not be coded for prestige, annual salary, or gender dominance. Of the remaining 152 subjects, 53 were males, 99 females. This could have been expected since the literature suggests that females as a group are more academically successful at this age level. It is also due to the fact that 23 of the 31 subjects eliminated due to choice of a fantasy occupation were males.

After data were collected and students were screened, the information was prepared for computer analysis, using the Statistical Package for the Social Sciences (SPSS^{x}, 1983 version). Frequency distributions were inspected for potential errors in range of scores for each variable. Also, a printout of the data was compared against original data sheets to insure accuracy in recording of data.

Data Analysis

The dependent variable in this study was level of aspiration. More specifically, four dependent

variables were used to examine level of aspiration:

Level of education desired

Prestige of occupation desired

Economic returns of occupation desired

Gender dominance of occupation desired

Four independent variables were used:

Values on the WVI

Self-concept

Amount of commitment to work as opposed to children, marriage, and other

Perception of potential opportunity for entry into high level jobs

Multiple regression analysis was used to examine the relationships of the variables as outlined in the research questions. The regression analysis was carried out separately for each dependent variable.

The following research questions were examined:

1. Are there differences between males and females in work values?

   Analysis - Means for males and females on the 15 work values were examined for differences using *t* tests.

2. Is the relationship between work values and level of aspiration the same for females and males?

   Analysis - Multiple regression analysis was used to examine the relationship of the work values to each dependent measure. These regression analyses were done separately by sex. The regression coefficients were tested for significant differences.

3. Do the following variables add to the explanation of aspiration level for females or males?

   a. Self-concept
   b. Amount of committment to career as opposed to marriage, children, and other
   c. Perception for potential opportunity for entry into higher level jobs

   Analysis - The same analysis procedures were followed as for Research Question 2. Multiple regression analysis was used to examine the relationship of these three variables to each dependent measure. These regression analyses were done separately by sex. The regression coefficients were tested for significant differences.

Given the large number of variables assessed in this study, the correlations of all independent variables with the dependent variables were inspected to reduce the independent variables to those which correlated significantly (.05 level) with each of the dependent variables (examined separately by sex). Comparisons were made in order to select variables which correlated for both sexes, taking into account the fact that a smaller sample of males required a higher r value to obtain a significant correlation. An inspection of a varimax rotated factor analysis of the 15 work values was made as another approach to selecting and reducing potential variables for analysis. The factor analysis (discussed in Chapter IV) produced a different configuration of factors for males than for females and was thus not used in the decision making process. Factor scores based on the total sample would not be accurate reflections of the factor scores derived from the separate analyses for females and males.

A blockwise regression procedure (stepwise regressions done separately on each of the three instruments separately by sex) was initially used in an attempt to select the best variables for the equation to be used with each dependent variable. A difference in SPSS^X programs resulted in the selection of variables through this method which had not appeared in the initially run Pearson Product-Moment Correlation programs. (The correlation matrix of the stepwise program did not

correspond with the correlation matrix of the Pearson Product-Moment program.) Thus, it was decided that those variables which were correlated (using the Pearson program) for males or females with the dependent variable being studied would be the ones entered into the equation for each respective dependent variable.

The above process allowed for selection of the "best" predictors for either females or males (or both) for each of the four dependent variables. A blockwise regression was carried out on these variables with a forced entry process to acquire the final regression coefficients for the chosen independent variables. These coefficients were tested for significant differences between the sexes on each of the predictor variables using the following formula:

$$t_{B_m - B_F} = \frac{B_m - B_F}{\sqrt{\sigma^2_m + \sigma^2_F}}$$

t was treated as a standard score, a value greater than two was considered a significant difference at the .05 level.

CHAPTER IV

RESULTS

Results will be described in the order of the research questions: 1) Gender differences in work values 2) Work values and level of aspiration 3) Self-conceptual variables and level of aspiration. The final section presents the results of a factor analysis of the work values.

Gender Differences in Work Values

Means and standard deviations for males and females are reported in Table 1 for each of the work values of the Work Values Inventory (WVI). The analysis for the Research Question (Are there differences between males and females in work values?) resulted in significant (.05 level) gender differences for Economic Returns and for Altruism.

The means for females and males on Economic Returns were 12.99 and 13.64 respectively. In the norming sample for this age group, the means on this variable were 12.44 for females and 13.11 for males. Males expressed higher values for the economic returns of work than the females.

The means for Altruism were 13.30 for females (12.78 in the norming sample for this age group) and 12.58 for males (11.80 for males of this age in the norming sample), indicating that the girls expressed a higher value for

Table 1

Means and Standard Deviations for Males and Females on the Work Values Inventory Scales

	Males		Females			
	Mean	SD	Mean	SD	t Value	Two-tailed Probability
Creativity	11.849	2.605	12.192	1.936	- .92	.359
Management	10.943	2.349	10.657	2.339	.72	.473
Achievement	12.887	1.613	13.333	1.927	-1.44	.153
Surroundings	12.717	1.769	13.051	2.027	-1.01	.314
Supervisory Relations	12.736	1.913	13.040	2.303	- .82	.412
Way of Life	13.849	1.116	13.828	1.767	.08	.938
Security	13.547	1.435	13.273	1.834	.94	.346
Associates	12.113	1.836	11.828	1.879	.90	.371
Esthetics	10.113	2.819	9.849	2.666	.57	.568
Prestige	12.811	1.744	12.576	2.000	.72	.471
Independence	12.830	1.773	12.515	2.042	.95	.345
Variety	11.245	2.111	11.495	2.052	- .71	.480
Economic Returns	13.642	1.482	12.990	2.068	2.03	.044
Altruism	12.585	2.098	13.303	1.966	-2.10	.038
Intellectual Stimulation	11.679	1.889	11.748	1.870	- .21	.831

"work which enables one to contribute to the welfare of others" (Super, 1970 p. 8).

A factor analysis of the WVI results, to be reported at the end of this chapter, explores differences in male and female value structures.

Work Values and Level of Aspiration

Research Question 2: Is the relationship between work values and level of aspiration the same for females and males? Four dimensions of the dependent variable, level of aspiration, were examined to answer this question: 1) Level of Education Desired 2) Prestige of Occupation Desired 3) Economic Returns of Occupation Desired 4) Gender Dominance of Occupation Desired.

Level of Education Desired

The following work values correlated significantly (.05 Level) with Level of Education Desired for females: Achievement (.16), Surroundings (.16), and Independence (.16). For males, the following work values had significant (.05 level) correlations with Level of Education Desired: Supervisory Relations (.27), Way of Life (.35), Security (.28), Prestige (.30), and Altruism (.23). Correlations with work values and the four independent variables are shown in Table 2.

A summary of the regressions and t tests of regression coefficients of the selected work values for Level of Education

Table 2

Work Values Which Correlated Significantly With Four Dependent Variables of Level of Aspiration

Females	Level of Education	Prestige	Economic Returns	Gender Dominance
Achievement	.1608			
Surroundings	.1598			
Supervisory Relations				-.1932
Esthetics		-.1860		
Independence	.1613		.1705	
Variety				-.1631
Economic Returns		-.1582	-.1776	-.2559
Altruism		.2546	.1675	
Males				
Supervisory Relations	.2662			.2634
Way of Life	.3520			.2921
Security	.2754			
Prestige	.2964			
Economic Returns		.2496		
Altruism	.2288			.2198
Intellectual Stimulation		.3170	.2548	.3968

Desired can be seen in Table 3. None of the selected work values was a significant predictor of Level of Education Desired for males. Two of the selected work values were significant predictors in the equation for females: Independence (beta = .262) and Prestige (beta = -.316).

Four of the selected Work Values Inventory scales yielded significant differences in regression coefficients for males and females. The two scales which were significant predictors of educational aspiration level for females, Independence and Prestige, were significantly different as predictors for females than for males (males beta = .019 for Independence and .103 for Prestige). Two other WVI scales had significant differences between regression coefficients for males and females, though they were not significant predictors in their respective equations; these were Surroundings (males beta = -.018; females beta = .144) and Security (males beta = .195; females beta = -.087). This indicates that these two variables explain or predict Level of Education Desired to a significantly different degree for females than for males.

The multiple R for males for the dependent variable Level of Education Desired on the WVI variables was .45180, and the R square for males was .20413, indicating that 21 percent of the variance for this dependent variable was accounted for by these selected WVI variables for males.

Table 3

Summary of Regressions and t Tests of Regression Coefficients of Work Values Inventory Scales for Level of Education Desired

	Males					Females					
Variable	B	SE B	BETA	T	SIG T	B	SE B	BETA	T	SIG T	$T_{B_M - B_F}$
Altruism	.059	.121	.077	.489	.628	.113	.108	.125	1.041	.301	-.976
Supervisor Relations	.047	.155	.055	.303	.763	.081	.091	.105	.886	.378	.016
Independence	.017	.41	.019	.122	.904	.227	.110	.262	2.058	.042	-2.407*
Surroundings	-.016	.137	-.018	-.117	.908	.126	.118	.144	1.069	.288	-2.002*
Security	.226	.184	.195	1.227	.227	-.084	.129	-.087	- .650	.518	2.366*
Way of Life	.362	.241	.250	1.502	.140	.060	.139	.060	.435	.664	1.53
Prestige	.096	.149	.103	.647	.521	-.279	.130	-.316	-2.152	.034	2.939*
(Constant)	-5.587	3.381		-1.653	.106	1.735	1.725		1.006	.317	
											p≤.05*
Multiple R	.452					.325					
R Square	.204					.106					

The multiple R for females for Level of Education Desired on the WVI variables was .32528. The R square for these variables was .10581, indicating that only 11 percent of the variance in Level of Education Desired was accounted for by the selected WVI scales for females.

Prestige of Occupation Desired

The following work values correlated significantly (.05 level) with Prestige of Occupation Desired for females: Esthetics (-.19), Economic Returns (-.16), and Altruism (.25). For males, Economic Returns (.25) and Intellectual Stimulation (.32) correlated significantly with this dependent variable.

The summary of regressions and t tests of regression coefficients for Prestige of Occupation Desired can be seen in Table 4. None of the work values selected for these regressions was a significant predictor in the equation for males, and only one work value, Altruism, was significant in the equation for females.

Three of the selected work values had significantly different regression coefficients for males and females: Altruism (males beta = .064; females beta = .284), Intellectual Stimulation (males beta = .283; females beta = -.002), and Economic Returns (males beta = .118; females beta = -.154). This indicates that these WVI scales were significantly different in their ability to predict Prestige of Occupation Desired for females than for males.

Table 4

Summary of Regressions and t Tests of Regression Coefficients of Work Values Inventory Scales for Prestige of Occupation Desired

	Males					Females					
Variable	B	SE B	BETA	T	SIG T	B	SE B	BETA	T	SIG T	$T_{B_M - B_F}$
Intellectual Stimulation	2.258	1.190	.283	1.897	.064	-0.016	.889	-.002	-0.018	.986	2.873*
Esthetics	- .620	.768	-.116	-.807	.424	-0.800	.618	-0.135	-1.294	.199	.395
Altruism	.458	1.115	.063	.410	.683	2.274	.842	.284	2.702	.008	-2.482*
Economic Returns	1.200	1.379	.118	.870	.389	-1.177	.813	-0.154	-1.447	.151	2.076*
Constant	13.559	24.905		.544	.589	49.812	14.490		3.438	.001	
											p<.05*
Multiple R	.360					.349					
R Square	.130					.122					

The multiple R for males was .36022, and the R square for males was .12976 meaning that 13 percent of the variance in the equation for males was accounted for in using these WVI scales.

The multiple R for females was .34875, and the R square for females was .12163; therefore, 12 percent of the variance in the prediction of Prestige of Occupation Desired was accounted for by these WVI scales for females.

Economic Returns of Occupation Desired

Three WVI scales correlated significantly (.05 level) for females with Economic Returns of Occupation Desired: Independence (.17), Economic Returns (.18), and Altruism (.17). One WVI scale, Intellectual Stimulation (.25), correlated with this dependent variable for males.

A summary of the regressions for Economic Returns of Occupation Desired, using the selected WVI scales for this dependent variable, can be seen in Table 5. None of the selected WVI scales was asignificant predictor of Economic Returns of Occupation Desired for males. Two of the selected Work Values Inventory Scales were significant predictors of Economic Returns of Occupation Desired for females: Economic Returns (as a work value) and Independence.

Three of the selected WVI scales were significantly different in their ability to predict Economic Returns of Occupation Desired for males and females. The regression

Table 5

Summary of Blockwise Regressions and t Tests of Regression Coefficients for Work Values Inventory Scales: Dependent Variable, Economic Returns of Occupation Desired

	Males					Females					
Variable	B	SE B	BETA	T	SIG T	B	SE B	BETA	T	SIG T	$T_{B_M - B_F}$
Intellectual Stimulation	2.383	1.454	.249	1.638	.108	-.078	1.102	-.008	-.071	.944	2.594*
Economic Returns	.440	1.720	.036	.256	.799	-2.481	.969	-.264	-2.560	.012	2.056*
Independence	-.202	1.458	-.020	-.138	.890	1.960	1.024	.206	1.914	.059	-2.081*
Altruism	.164	1.321	.019	.124	.902	1.438	1.081	.146	1.330	.187	-1.680
(Constant)	-1.774	31.960		-.056	.956	18.007	18.222		.988	.326	
											P<.05*
Multiple R	.258					.326					
R Square	.067					.106					

coefficients were significantly different (.05 level) for the following three WVI scales: Intellectual Stimulation (males beta = .249; females beta = -.0075), Economic Returns (males beta = .036; females beta = -.264), and Independence (males beta = -.020; females beta = .206).

The multiple R for males for the dependent variable Economic Returns of Occupation desired was .25813, and the R square for males was .06663. This indicates that only 6 percent of the variance was accounted for by the use of the selected WVI scales in the regression for males on the dependent variable Economic Returns of Occupation Desired.

The multiple R for females was .32579 and the R square for females was .10614. Therefore, 11 percent of the variance in Economic Returns of Occupation Desired was accounted for by the selected WVI scales for females.

Gender Dominance of Occupation Desired

For the dependent variable Gender Dominance of Occupation Desired, three WVI scales correlated significantly (.05 level) for females: Supervisory Relations (-.19), Variety (-.16), and Economic Returns (-.26). For males, Supervisory Relations (.26), Way of Life (.29), Altruism (.22), and Intellectual Stimulation (.40) correlated significantly with this variable.

A summary of regressions for the dependent variable, Gender Dominance of Occupation Desired, and t tests on the

regression coefficients for the WVI scales used in these regressions can be seen in Table 6. One of the Work Values Inventory scales was a significant predictor for males of choice of an occupation which is dominated by males; this scale was Intellectual Stimulation. One of the WVI scales, Economic Returns, was significant as a predictor in the equation for females.

Intellectual Stimulation (males beta = .344; females beta = -.009) and Economic Returns (males beta = .056; females = -.025) yielded significant differences in the regression coefficients for males and females.

Prediction of choice of a male-dominated job for males was significantly greater than for females for the WVI scale, Intellectual Stimulation. Prediction of choice of a male-dominated job for females was significantly greater than for males on the WVI scale, Economic Returns. This was a negative correlation for females.

The multiple R for males in the regression equation for Gender Dominance of Occupation Desired was .44587, and the R square for this dependent variable was .1988, indicating that 20 percent of the variance in explaining choice of a male-dominated job was accounted for by the selected WVI scales.

The multiple R for females in this regression was .26273. The R square for females for this regression was .069, meaning that only 7 percent of the variance in choice of a male-dominated job was accounted for by these selected WVI variables for females.

Table 6

Summary of Blockwise Regression and t Tests of Regression Coefficients for Work Values Inventory Scales· Dependent Variables, Gender Dominance of Occupation Desired

	Males					Females					$T_{B_M - B_F}$
Variable	B	SE B	BETA	T	SIG T	B	SE B	BETA	T	SIG T	
Altruism	.060	1.549	.006	.039	.969	-1.071	2.010	-.063	-.533	.596	.882
Economic Returns	.747	1.848	.056	.404	.688	-4.040	2.010	-.025	-2.010	.047	5.187*
Intellectual Stimulation	3.590	1.506	.344	2.384	.021	-.154	1.962	-.009	-.079	.937	2.977*
Way of Life	3.340	2.600	.189	1.285	.205	2.749	2.362	.145	1.164	.247	.544
Variety	.009	1.384	-.001	-.006	.995	-1.133	1.887	-.069	-.600	.550	.876
(Constant)	-25.148	37.839		-.665	.510	86.611	33.349		2.597	.011	
											$p < .05$*
Multiple R	.446					.263					
R Square	.199					.069					

Self-Conceptual Variables and Level of Aspiration

Research Question 3 : Do the following variables add to the explanation of aspiration level for females and/or males? (a.) Self-concept, (b.) Amount of commitment to career as opposed to marriage, children, and other (c.) Perception of potential opportunity for entry into higher level jobs. Four dimensions of the dependent variable, level of aspiration, were examined to answer this question: 1) Level of Education Desired 2) Prestige of Occupation Desired 3) Economic Returns of Occupation Desired)4 Gender Dominance of Occupation Desired. Work values which were significant in the equations for males or females were entered with the self-conceptual variables which correlated significantly with the respective dependent variable.

Level of Education Desired

The following Piers-Harris scales correlated significantly (.05 level) with Level of Education Desired for females and males: Intellectual and School Status (females .29; males .46) and Physical Appearance and Attributes (females .24; males .24). The total score of the Piers-Harris correlated significantly for males (.25). Correlations with Piers-Harris scales and the four independent variables can be seen in Table 7.

Table 7

Components of Piers-Harriss Self-concept Scale Which Correlated Significantly with Dependent Variables

Females

	Level of Edu	Prest.	Money	Gender D.
Intellectual and School Status	.2907	.2795	.2210	
Physical Appearance and Attributes	.2397	.2180	.1650	
Popularity		.1832	.1600	

Males

	Level of Edu	Prest.	Money	Gender D.
Intellectual and School Status	.4566	.2649		
Physical Appearance and Attributes	.2350		.2588	.2299
Total	.2546			
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Popularity (non-significant correlation for males)		.1387	.1332	

A summary of significant (.05 level) correlations of the occupational self-concept measures with the four dependent variables can be seen in Table 8. Among these, the following questionaire items were significantly correlated with the dependent variable Level of Education Desired: "chances of getting a job with high pay" (females .21; males .40), "chances of getting a job with high prestige" (males .28) and "how much money you think you will be making when you are 35 years old? (females .27).

A summary of the regressions and t tests of regression coefficients for the above-mentioned self-conceptual variables along with significant work values derived from the regressions of research question number two can be seen in Table 9. These variables were forced into the equation in one step using the Enter program of SPSS^{X}(1983 version).

For males, one of the selected variables was significant (.05 level) in the prediction equation for Level of Education Desired; this was the Piers-Harris scale, Intellectual and School Status (beta = .624). This scale was significant for females also (beta = .371). Three other self-concept variables were significant in the equation for females: "money when 35 years old" (beta = .227), Piers-Harris Total (beta - -.500), and Physical Appearance and Attributes (P-H) (beta = .398).

Table 8

Significant Correlations for Amount of Commitment to Career

Females

No significant correlation with any of the dependent variables.

Males

Gender Dominance = .3386

Significant Correlations for Perception of Opportunity to Achieve

	Level of Educ.	Money	Gender Dom.
Females			
A Job With High Pay	.2057		
Males			
A Job With High Pay	.4021		
A Job With High Prestige	.2759	.2693	.2549

Significant Correlations for How much money do you think you will be making when you are 35?

	Level of Educ.	Prestige	Money	Gender Dom.
Females	.2730	.2614	.2584	.2118
Males		.3410	.2385	

Table 9

Summary of Regressions and t Tests for Selected Work Values Inventory Scales, Piers-Harris Scales, and Self-Concept Variables for Level of Education Desired

	Males					Females					
Variable	B	SE B	BETA	t	SIG T	B	SE B	BETA	t	SIG T	$T_{B_M-B_F}$
Money when 35	-.016	.238	-.009	- .069	.945	.489	.213	.227	2.295	.024	4.187*
Prestige (WVI)	.200	.125	.215	1.595	.118	-.236	.106	-.268	-2.229	.028	6.576*
Total (P-H)	-.045	.041	-.296	-1.095	.280	-.085	.031	-.500	-2.773	.007	1.493
Independence (WVI)	.086	.121	.093	.709	.482	.168	.102	.194	1.653	.102	1.260
Chances of getting a job with high pay	.403	.212	.336	1.901	.064	-.022	.165	-.016	- .136	.892	3.195*
Chances of getting a job with high prestige	-.236	.188	-.238	-1.253	.217	.037	.153	.029	.243	.809	-2.505*
Intellectual and School Status (P-H)	.275	.090	.624	3.054	.004	.224	.090	.371	2.478	.015	0.000
Physical Appearance and Attributes (P-H)	.041	.110	.084	.373	.711	.228	.091	.398	2.508	.014	-3.0357*
(Constant)	-.902	2.488		-.363	.719	4.295	1.786		2.405	.018	
											p<.05*
Multiple R	.613					.506					
R Square	.376					.256					

Four self-concept variables had significantly different regression coefficients for males than for females in predicting Level of Education Desired: "Money when 35", (males B = -.016; females B = .489), "chances of getting a job with high pay (males B = .403; females B = -.022), "chances of getting job with high prestige" (males B = -.236; females B = .037), and Physical Appearance and Attributes (P-H) (males B = .041; females B = .228).

The multiple R for males for the regression of selected work values, self-concept, and occupational self-concept variables was .613, and R square was .376. Thirty-eight percent of the variance in the prediction of Level of Education Desired was accounted for by the equation for males. The selection of work values in the regression for Research Question 2 accounted for 20 percent of the variance in prediction of this dependent variable.

For females, the multiple R was .506, and the R square was .256 meaning that 26 percent of the variance in the prediction of Level of Education Desired was accounted for by the equation for females. Eleven percent of the variance was accounted for in the equation for Research Question 2 which used selected work values only.

Prestige of Occupation Desired

The following Piers-Harris scales correlated significantly (.05 level) with Prestige of Occupation Desired: Intellectual and School Status (females .28; males .26), Physical Appearance and Attributes (females .22), and Popularity (females .18). One of the questionnaire items correlated significantly with Prestige of Occupation Desired: "money when 35" (females .26; males .34).

A summary of the regressions and *t* tests for the regression coefficients for selected work values and self-conceptual variables can be seen in Table 10. For males and females "money when 35" was significant as a predictor of Prestige of Occupation Desired (males beta = .289; females beta = .208). None of the regression coefficients was significantly different for males and females in their ability to predict Prestige of Occupation Desired.

The multiple R for males in the regression equation for Prestige of Occupation Desired was .403, and the R square was .163. Sixteen percent of the variance in the equation was accounted for by the selected variables. Significant work values alone (from Research Question 2) had a multiple R of .360 and an R square of .130.

Table 10

Summary of Regressions and t Tests for Selected Work Values Inventory Scales, Piers-Harris Scales, and Self-Concept Variables for Prestige of Occupation Desired

	Males					Females					
Variable	B	SE B	BETA	t	SIG T	B	SE B	BETA	t	SIG T	$T_{B_M-B_F}$
Money When 35	4.688	2.298	.289	2.040	.047	3.989	1.886	.208	2.115	.037	.532
Altruism (WVI)	.781	.980	.109	.797	.430	1.494	.806	.186	1.854	.067	-1.280
Popularity (P-H)	- .833	1.360	-.132	-.612	.544	.704	.840	.105	.838	.404	-1.436
Intellectual and School Status (P-H)	.746	.764	.185	.977	.334	.605	.730	.112	.829	.409	.624
Physical (P-H)	.398	.951	.088	.418	.678	.346	.764	.068	.453	.651	.0919
(Constant)	24.526	15.016		1.633	.109	6.019	12.711		.473	.637	
											p<.05*
Multiple R	.403					.409					
R Square	.163					.167					

For females, the multiple R was .409 and the R square was .167, meaning that 17 percent of the variance in prediction of Prestige of Occupation Desired was accounted for in the equation using selected work values and significantly correlated self-conceptual variables. Twelve percent of the variance was accounted for by Research Question 1 where only selected work values were entered into the regression.

Economic Returns of Occupation Desired

Piers-Harris scales which correlated significantly (.05 level) with Economic Returns of Occupation Desired were Intellectual and School Status (females .22), Physical Appearance and Attributes (females .17; males .26), and Popularity (females .16). Questionnaire items which correlated significantly with this dependent variable include "chances of a job with high prestige" (males .27), and "money when 35" (females .26; males .24).

A summary of regressions and t-tests of selected work values and self-conceptual variables for Economic Returns of Occupation Desired are shown in Table 11. None of the variables was significant in the equation for males in predicting this dimension of the dependent variable. For females, "money when 35" (beta = .253) was the only self-conceptual variable to be significant in predicting

Table 11

Summary of Regressions and t-Tests for Selected Work Values Inventory Scales, Piers-Harris Scales, and Self-Concept Variables for Economic Returns of Occupation Desired

	Males					Females					
Variable	B	SE B	BETA	t	SIG T	B	SE B	BETA	t	SIG T	$T_{B_M - B_F}$
Money when 35	3.087	2.954	.159	1.045	.302	5.969	2.370	.253	2.519	.014	1.635
Independence (WVI)	-0.385	1.495	-.038	- .257	.798	1.832	1.004	.193	1.825	.071	-2.001*
Economic Returns (WVI)	.084	1.744	.007	.048	.962	-2.557	.948	-.272	-2.696	.008	1.804
Popularity (P-H)	-1.284	1.733	-.169	-.741	.463	.911	1.041	.110	.875	.384	1.585
Chances of a job with high Prestige	1.467	2.017	.132	.727	.471	.140	1.488	.010	.094	.925	.974
Intellectual and School Status (P-H)	.260	1.005	.054	.259	.797	.653	.882	.099	.741	.461	.815
Physical Appearance and Attributes (P-H)	1.272	1.280	.235	.994	.326	.076	.950	.012	.080	.936	1.396
(Constant)	12.953	29.854		.434	.666	.124	18.471		.007	.995	
											p<.05*
Multiple R	.351					.435					
R Square	.123					.190					

Economic Returns of Occupation Desired. None of the t-tests of regression coefficients for these variables indicated that there were significant differences between males and females in amount of prediction of this dependent variable.

The Multiple R for males on this dependent variable was .351, and the R square was .123, meaning that 12 percent of the variance was accounted for by the variables selected for this regression. Selected Work Values Inventory items alone accounted for 7 percent of the variance in prediction of Economic Returns of Occupation Desired for males.

The Multiple R for females was .435 and the R square was .190 for the selected variables for this dependent variable. Nineteen percent of the variance was accounted for in this equation for females, and 11 percent of the variance had been accounted for in the previous equation for Economic Returns of Occupation Desired, which used only selected Work Values Inventory Scales.

Gender Dominance of Occupation Desired

The only Piers-Harris variable which correlated significantly (.05 level) with this dependent variable was Physical Appearance and Attributes (males .23). Two questionnaire items correlated significantly with Gender Dominance of Occupation Desired: "chances of a job with

high prestige" (males .26) and "money you will be making when 35" (females .21).

A summary of the regressions and t-tests for selected Work Values Inventory Scales, Piers-Harris Scales, and the two items which measured occupational self-concept can be seen in Table 12. No self-conceptual variables were significant in the equation for males. One of the self-conceptual variables was significant in the equation for females: "money when 35" (beta = .274). There was, for this variable, a significant difference (.05 level) in regression coefficients for males and females. "Money when 35" was a negative (nonsignificant) predictor of Gender Dominance of Occupation Desired for males and was significantly positive as a predictor for females (meaning that choice of a male-dominated job correlated with self-perception of making a higher salary as an adult).

The multiple R for males for Gender Dominance of Occupation Desired was .477, and the R square was .227. Twenty-three percent of the variance in predicting choice of a male-dominated job was accounted for in this equation, and 19 percent of the variance was accounted for in the previous equation which had included only selected Work Value Inventory Scales.

For females, the multiple R was .379, and the R square was .144 for this measure of aspiration level. Fourteen

Table 12

Summary of Regressions and t-Tests for Selected Work Values Inventory Scales, Piers-Harris Scales, and Self-Concept Variables for Gender Dominance of Occupation Desired

	Males					Females					
Variable	B	SE B	BETA	t	SIG T	B	SE B	BETA	t	SIG T	$T_{B_M - B_F}$
Money when 35	-4.640	3.188	-.219	-1.455	.152	11.174	4.132	.274	2.704	.008	6.015*
Economic Returns (WVI)	1.586	1.733	.119	.915	.365	-4.258	1.593	-.263	-2.673	.009	8.570*
Physical Appearance and Attributes (P-H)	1.017	.932	.173	1.090	.281	1.607	1.076	.148	1.493	.139	1.097
Intellectual Stimulation (WVI)	4.573	1.552	.438	2.946	.005	-1.528	1.841	-.085	-.830	.409	6.163*
Chances of a job with high Prestige	.808	1.973	.067	.410	.684	.239	2.522	.010	.095	.925	.975
(Constant)	1.467	28.185		.052	.959	62.654	29.796		2.103	.038	
											p<.05*
Multiple R	.477					.379					
R. Square	.227					.144					

percent of the variance was accounted for in the equation for females using the selected self-conceptual variables along with the Work Values Inventory Scales. The regression which used selected WVI scales alone (from research question number two) had an R square of .069 for females meaning that 7 percent of the variance in choice of a male-dominated job was accounted for in that selection.

Factor Analysis of the Work Values Inventory

The factor analysis of the Work Values Inventory was done as a preliminary attempt to select and reduce the number of potential variables for analysis. Results of this varimax rotated factor analysis of the 15 work values will be presented in this section to illustrate some differences in male and female value structures for this group as measured by this instrument. These results contribute to the understanding of research question number one of this study: "Are there differences between males and females in work values?" (Results of the factor analysis can be seen in Appendix G.)

There were five factors for males and three for females. Super's (1970) reliability study (Appendix G) for the WVI reported four factors for males and four for females which were very similar to each other in scale loadings. In the current study, there appear to be some similarities between the sexes but also many differences.

The first factor for the females includes Achievement and Intellectual Stimulation which are common to the first factor for males. Examining items of the inventory (Appendix E lists items categorized by values) one might call this factor one of "self-expression" and/or "personal satisfaction". Males include Way of Life in this dimension: females include Prestige, Independence, and Altruism. Altruism loaded secondarily on this factor for males, indicating an interesting similarity in this dimension between the sexes.

The second factor for females included Surroundings, Supervisory Relations, and Security which were common to the second factor for males. Super's studies (1970) with tenth graders consistently found Security and Economic Returns linked together, yet this did not occur in the present study for males though it did

occur for females. This second factor is very similar to Super's "material" or "situational" factor and describes a job in which employment is certain, is in a pleasant environment, and in which supervisors are pleasant and easy to get along with. For females in this study (and both males and females in Super's study), adequate pay was an important element of this factor. Prestige was included in this factor for males; Way of Life and Associates were included for females.

The third factor for females has some similarities to the third factor for males, having Esthetics and Variety in common. Super's third factor has similar elements in common for females: "Most female occupations that provide for creativity and variety have an esthetic component (designing, applied arts, etc.). These distinctions also coincide with other findings pertaining to such differences between male and female as values and interests" (Super, 1970, p. 33). Though Management loads slightly more on this factor, it seems to fit better into factor one along with Independence (as it does for males) and has a nearly equal loading on factor one as for factor three. The inclusion of Associates and Altruism in this dimension

gives it an interesting character for males because of their "non-job" oriented implications; concern for others does not seem to be associated with job values for males, whereas concern for others is integrated into strictly job values for females. Altruism is associated with Prestige and Achievement, and Associates appears with "material" and "situational" factors which are strictly work related values.

Of the remaining factors for males, factor IV parallels the "Behavior Control" dimension of Super's study and also has a common element (Independence and Management appearing together) for females in the current study. Super (1970) stated that:

> The combination of Independence and Management on factor IV is predictable. In many work situations independence is gained by obtaining promotion to managerial levels. The lesser association of Prestige with this dimension, (appearing for females in the current study) on the first test, also is reasonable, since prestige is associated both with managerial position and jobs which in themselves provide independence from direction by others. An appropriate title for this combination of Independence and Management might be Behavior Control. (p.33)

The appearance of Creativity with Economic Returns as a fifth factor for males in this sample seems to

be a unique occurrence and may be indicative of some different value constructs for males of this age group and academic standing.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

Discussion and Conclusions

Gender Differences in Work Values

Research Question 1 -- Are there differences between males and females in work values?-- can from these results, be answered "yes". The work values of Economic Returns and Altruism found to be significantly different for males and females in this study are important variables in occupational decision making (Super, 1970). Apparently this difference is still a significant and fundamental difference between the sexes even at this early age and among relatively successful, motivated, and achieving students.

The finding that girls scored significantly higher than boys on Altruism and that boys scored significantly higher than girls on Economic Returns is consistent with Hendrix and Super's (1968) study of tenth grade students. Seventh grade students (Super, 1970) showed some but not significant differences in these values. It is important to note that these previous studies have not focused on high-achieving students. Sex differences in general populations at this level have previously been found to

be negligible (Super, 1970). "The greater concern of girls with human values (and perhaps with achievement, in a school setting), and the greater stress put by boys on independence (and perhaps on material considerations) are such as one might expect to find with a values inventory" (Super, 1970, p.11).

Other discussions in the literature of gender differences in valuing (Gilligan, 1982; Lever, 1976; and Kohlberg, 1969) have pointed to stereotyped roles and expectations for males and females. It appears that these same roles are still being conformed to as evidenced by results of this study, especially those results which show girls having altruistic orientations, and boys being motivated by economic concerns.

Work Values and Level of Aspiration

The results of Research Question 2 -- Is there relationship between work values and level of aspiration the same for males and females?--indicated that certain work values can be important elements to explain gender differences in level of aspiration. The discussion of this research question will deal with each dimension of the dependent variable, level of aspiration.

Level of education desired. Level of Education Desired is a measure of aspiration that was not explained significantly for males in this study, by any of the work values alone. The fact that 21 percent of the variance in their self-projected levels of educational aspiration was accounted for by these variables does indicate though that there is a relationship between work values and Level of Education Desired for high-achieving adolescent males.

The finding that Independence, as a work value, is a significant predictor for adolescent females of level of educational aspiration is in keeping with Tittle's finding (1981) that Independence is a value assoicated for females with higher aspirations. The work value, Independence, will be further discussed in relation to Economic Returns of Occupation Desired.

The finding that Prestige, as a work value, was a significantly negative predictor in this equation of educational aspiration was similar to the finding by Barnett (1975) that females indicated an "aversion" for prestigious jobs. This can be explained by Horner's (1972) success avoidance theories which speculate that females are taught to not seek prestige in our society. If a low value was placed on Prestige for females who desired higher levels of education, it is likely that

high-achieving adolescent females are still responding to messages in our society that they can seek achievement, but that they must find another motive (other than prestige) in their quest for advancement and success.

Three of the work values were significantly different predictors for females than for males for Level of Education Desired. The results indicated that Independence, Surroundings, and Prestige were work values which were significantly more important for high-achieving adolescent females in explaining educational aspiration, than they were for the adolescent males with the same achievement status.

Prestige of occupation desired. Altruism was a work value which was significant as a predictor of choice of a prestigious job for females in this study. This finding may be partially attributed to the fact that ten females chose "doctor" as an occupation; this occupation had a high prestige rating, and the occupation for females may be perceived as one with altruistic motives rather than economic motives as it may be for males. This finding is a further indication, as stated earlier in this discussion, that females are taught to choose "appropriate" motives for their success strivings. Even more evidence of this is added by the fact that Economic Returns as a work value was significantly (.05 level) better as a predictor of

choice of a prestigious job for males than it was for females. (It was even a negative predictor for females.)

Three work values were significantly different for females than for males in their ability to predict choice of a prestigious job: Intellectual Stimulation, Altruism, and Economic Returns. Intellectual Stimulation was important as a predictor for males, but not for females. Males apparently perceive of prestigious jobs as being intellectually stimulating. As will be discussed later, males also associated Intellectual Stimulation with male-dominated jobs.

Economic returns of occupation desired. This dimension of level of aspiration was explained to a significant degree for females by two of the work values included in the regression: Economic Returns and Independence. The value Economic Returns had a negative relationship with Economic Returns of Occupation Desired. This means that females with job choices which were high in economic remuneration tended to place a low value on Economic Returns. Again, this may be offset by the disproportionate number of females who chose "doctor", an occupation which was listed by the Occupational Outlook Handbook as one of the highest in salary. This does clearly illustrate, however, that high-achieving adolescent females disassociate economic

success from their motives (as measured by work values) in selecting an occupation. Independence again shows up as an important variable for females to explain choice of a high aspiration (in this case, a high-paying job). Independence has stereotypically been considered a male characteristic (Chodorow, 1974; Gilligan, 1982; Katz, 1979; & Dowling, 1981), and males are rewarded for having it (Bardwick, 1971); so, it is important to note that females in this sample who valued independence as a work characteristic chose jobs with higher economic returns. Perhaps they viewed well-paying jobs as occupations which would offer independence. Another possibility is that they were independent thinkers (since they value this characteristic), and therefore, were not as greatly influenced by socialization factors in their environment to make them choose traditionally "female" jobs which pay low salaries.

Gender dominance of occupation desired. Economic Returns and Intellectual Stimulation were the work values which related in significantly different degrees to explanation of choice of male dominated occupations.

Economic Returns had a significantly negative relationship with this dependent variable for females, indicating again that females disassociate economic gain from choice of occupation. This result indicates that females who placed a high value on Economic Returns tended not to choose male-dominated jobs. The paradoxical nature of

this finding as well as other such findings mentioned earlier can be explained by one of the theories proposed earlier in this paper. The theory is that females (not placing a high value on economic returns) select occupational categories early without considering and without knowing about economic returns (Lewis, 1968; Wijting, Arnold, & Conrad, 1977; Crites, 1978; Rathburn, 1971; and Looft, 1971). Socialization factors are strongly implicated in this result as the reason for job choice among females, since male-dominated jobs are still commonly known to offer greater economic returns. Again, it is important to note that these are successful high-achieving students, so that lack of achievement motivation at this stage cannot be identified as a reason for low aspiration.

Economic Returns was not a significant factor in explaining the tendency of males to choose male-dominated jobs. Intellectual Stimulation, however, was an important factor in explaining high-achieving adolescent males' tendency to choose male dominated jobs, and was significantly different as a predictor than for females. Work in which one has to keep solving new problems, staying mentally alert and mentally challenged, characterizes the item content for this work value. This may, for high achieving adolescent males, express their conceptualization of what a "male" job is. This finding fits in with the general undervaluing of female occupations (Touhey, 1974,

Teglasi, 1981; & Collins, Reardon, & Waters, 1980): that is, among these males who were succeeding intellectually, there was a tendency to value jobs which are intellectually challenging and to associate such jobs with those occupations which are dominated by males.

Self-Conceptual Variables and Level of Aspiration

Research Question 3 asked if self-concept (as measured by the Piers-Harris in this study), amount of commitment to career, or perception of potential opportunity for entry into high level jobs (measures of occupational self-concept) added to the explanation of aspiration level for females or males.

Level of education desired. The Piers-Harris Scale which was a significant positive predictor of educational aspiration level for males and females was Intellectual and School Status. It is logical to assume that those students who had a positive feeling about their performance in school would have high educational aspiration. Males and females did not differ on this Piers-Harris Scale in prediction of this dependent variable, indicating that females apparently feel no conflicts about succeeding in the intellectual and educational sphere. Two other Piers-Harris Scales which were significant predictors of educational aspiration level for females indicated that aspects of self-concept are important variables to explain

high-achieving adolescent females' tendency to desire high levels of education. The Piers-Harris Total Score and the Physical Appearance and Attributes Scale were significant predictors for females. The importance of "looks", self-perceived physical appeal, being desirable to others, etc. as expressed by the item content of this scale corresponds with references in the literature to the female's theorized need to appeal to others. The biological basis for this need was explored by Freud (1927), and Fromm (1947), and the socialized basis for this "need" has been addressed by such writers as Dowling (1981), Gilligan (1982), Bardwick (1971), and others. The fact that this perception of self was predictive of educational aspiration in this study may be indicative of how females view their ability to achieve success. If they feel positive and confident about their physical appearance (an asset for females particularly, in our society), that confidence may transfer to academic confidence and success strivings. This variable was not significantly predictive, however, of high aspiration in the other dimensions of the dependent variable.

"Money when 35" was an occupational self-concept measure that was predictive of educational aspiration for females and not males (the difference in regression coefficients was significant at .05 level). The fact that females in this study who viewed themselves as making a lot of money in their futures tended to view themselves as attaining higher

levels of education, may be indicative that females think that educational pursuits will lead to high-paying jobs. This may have some basis in fact since it is the more educated females who have attained "well paying jobs" (for females). Traditional "female" jobs that required degrees such as teaching and nursing have paid better than those which required little education. Educational avenues have traditionally given women access to higher levels of pay; these avenues have not been frowned upon by society as have other recourses, such as going into "male" jobs, becoming ambitious in the business world, or other such direct attempts at being financially successful.

Prestige of occupation desired. The only self-conceptual variable to be significant as a predictor for males and females of Prestige of Occupation Desired was "money when 35". Self-perceptions of how much money the students thought they would be making when they would be 35 years old with the level of prestige of the occupation they chose. This questionnaire item apparently taps a source of occupational self-concept that is meaningful for this age group, especially for females, since it was significant as a predictor for all four of the dimensions of level of aspiration for females.

Economic returns of occupation. For females, one of the self-conceptual variables was a significant predictor of economic returns of choice of occupation. Females in this study who perceived themselves as making higher levels of money (at the age of 35) chose jobs in which economic returns are relatively high. Economic returns as a value was not a predictor of choice of a well paying job; as stated earlier, the females in this study apparently did not make occupational choices because they placed a high value on this quality in the job (the relationship of Economic Returns as a value to Economic Returns of Occupation Desired was significantly negative in the equation). However, it is probable that those who chose high-paying jobs were cognizant of the fact that their job choice paid well, since there was a significant positive relationship between "money when 35" and Economic Returns of Occupation Desired.

Gender dominance of occupation desired. In examining the gender dominance of the occupations chosen by this study group, it was found that only one self-conceptual measure predicted this aspect of job choice to a significant degree. Again, "money when 35" was a significant positive predictor of this dependent variable for females. It was a negative predictor and significantly different as a predictor for males.

Concluding Comment

The addition of self-conceptual variables to the work values added to the explanation of variance for each of the four measures of aspiration level. Both of these constructs were useful in predicting aspiration levels of the males and females in this study.

Lack of information about job choices, lack of knowledge about the demands of their future adult lives, and other such proposed variables may contribute to inappropriate job choices being made by high-achieving female adolescents. But, it is clear from these results, that different value systems and certain self-conceptual variables, including occupational self-concept variables, are also significant in explaining aspiration level among high-achieving adolescent females and males.

Implications

The results of the study of sex differences in work values (Research Question 1) imply that high-achieving adolescent males are already at this age more oriented to making job choices which will result in high economic returns than are high-achieving females. Also, the results indicate that females of this age and achievement status are significantly more concerned with altruistic values and motives than are males of this age and

achievement status. Further evidence, therefore, has been added by this study of why females in general continue even at this early age and in these changing times, to aspire to sex-role stereotyped job choices which on the whole, continue to pay less, have less prestige and benefits, and are primarily only altruistic in nature. Though we live in a society which often measures the worth of its people by their economic status, females continue to value roles that are altruistic and nurturant, and lacking in economic and social status. Financial remuneration does not seem to be a primary motive for high-achieving adolescent females in making occupational choices.

In studying work values, a more comprehensive instrument would possibly give more valid and reliable measures. The apparent instability of the WVI (as indicated by the factor analysis) brings into question whether it should be continued to be used as a research device (especially with this age group). Also, its low inter-item correlation (reported in Appendix I) and low correlations with the dependent variables give it questionable basis as a measure of work values. This may be due to the fact that three item scales are used as measures for the values. The use of factor scores or scales which represent certain categories are

recommended in the manual, but this solution presented problems in this study since the factor structures were not the same for males and females.

The results of the study of work values and level of aspiration (Research Question 2) pointed up a need for continued study of socialization processes. What kinds of socialized responses exist among younger high-achieving students? Studies of younger age groups may render a longitudinal perspective on the development of these patterns. Further exploration of why high-achieving females do not generally view themselves in higher level jobs would add to the understanding of this issue.

There are evidences in this study that sex-role stereotyping may be changing. Several female students saw themselves in nontraditional roles. There was, however, no such cross-over among males, indicating perhaps the negative value placed on traditionally "female" jobs. Studies of other groups in different regions of the country would shed light on this possible "social change".

Research Question 3 dealt with general self-concept variables and occupational self-concept variables and their relationship to aspiration level among high-achieving

adolescents. Since general self-concept scores do not show gender differences except occasionally on specific scales, it might be more fruitful to explore in further depth other methods of tapping occupational self-concepts (how students view themselves as fitting into various occupational categories in their adult lives). Also, it might be of use to further explore how various students are affected differentially by socializing factors in their environments. Some females, as well as males, perhaps react and respond to social pressures and expectations more than others; what factors are related to this? Further study of high-achieving females who choose high-level or traditionally male occupational roles may reveal important variables to assist in understanding how negative effects of sex-role socializing pressures in our society can be counteracted.

Implications for practice are particularly evident for school counselors. High-achieving males are motivated, apparently by social conventions, to consider jobs that pay well. High-achieving females in our society are not considering economic returns in their job choices, but are increasingly being required by changing social structures to support themselves and in many cases find themselves being responsible for the support of their children also. Inflation has caused a need for two

incomes in many families, and increasing divorce rates have made women less likely to be supported for the rest of their lives. There appears to be a cultural lag in socialization processes: conditions have changed, but social attitudes and teachings have not. We cannot afford to have potentially successful females socialized to fit roles which no longer realistically exist in our society. Information about students' occupational choices should be provided to this age group; choices should at least be informed choices. High achieving adolescents should be provided with a variety of options and should be encouraged to view themselves in many possible high-level jobs, particularly females, since social conformities have not allowed them to view themselves realistically in "successful" positions in our society. High-level occupational options could be pointed out which also fit the student's value system. It may be that high-achieving females, for instance, could appreciate the nurturant and altruistic role of a doctor who also happens to hold prestige and positive financial position in our society. A merging of perceptions of work roles such that there are no longer "male" and "female" jobs, but merely jobs which fit the individual's needs, skills, and abilities is a significant goal to be strived for by school counselors as well as all educators of youth.

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APPENDIX A

Student Permission Letter

LEDFORD JUNIOR HIGH SCHOOL
ROUTE 4, BOX 786
THOMASVILLE, N. C. 27360

476-4816

E. LAWSON BROWN, SUPERINTENDENT
DAVIDSON COUNTY SCHOOLS

JIM CARPENTER
PRINCIPAL

Dear Parents of Eighth Graders:

A special opportunity will be offered to eighth grade students this year. Eighth graders are at a point where they should begin thinking about their future occupation. They should begin thinking now about the courses they will need to take in high school. The way they are thinking of themselves now influences whether or not they will make appropriate plans. Therefore, a short inventory of opinions and attitudes about these areas will be offered. Results will be discussed with all students who indicate an interest.

The results of some of these inventories will be used in a project being done through the University of North Carolina at Greensboro (no names will be attached, and all information will be kept strictly confidential).

Please indicate that you give permission for your child to participate in this project by signing below.

_____

(Signature of parent or legal guardian)

*If you have further questions, call: Kay Brown
Guidance Counselor
Ledford Junior High School
(476 4816)

APPENDIX B

Listing By Sex of Student Occupational Choices

Occupational Choices

Males		Females	
Professional Sports	17	Doctor	10
Mechanic	6	Nurse	9
Computer science	5	Interior design	9
Lawyer	4	Teacher	8
Doctor	4	Secretary	7
Pilot	3	Beautician	5
Veterinarian	3	Model	4
Accountant	2	Singer	3
Architect	2	Veterinarian	3
Artist/cartoonist	2	Accountant	2
Business	2	Business	2
Engineer	2	Child care	2
Factory worker	2	Computer science	2
Police work	2	Dental hygienist	2
Sales	2	Fashion design	2
Actor	1	Psychologist	2
Archeologist	1	Actress	1
Carpentry	1	Anesthesiologist	1
Chef	1	Architect	1
Construction	1	Astronomer	1
Delivery service	1	Band director	1
Farming	1	Chef	1
Grocery store	1	Dancer	1
Marine recruiter	1	Dance teacher	1
Medical research	1	Dentist	1
Photographer	1	Factory worker	1
Politics	1	Forestry	1
Rock singer	1	Grocery store	1
Sportscaster	1	Horse training	1
Systems analyst	1	Journalist	1
Teacher (PE)	1	Marine biologist	1
		Music field	1
		Optomologist	1
		Orthodontist	1
		Pharmacist	1
		Photographer	1
		Physical therapist	1
		Politics	1
		Radiologist	1
		Stewardess	1
		Waitress	1
		Zoologist	1
		Lawyer	1

APPENDIX C

Item Eight of Questionnaire - Sex-Role Socialized Variables

Item Eight of Questionnaire
Socialized Variables

	Males		Females	
	Biggest Obstacle	Next Biggest	Biggest Obstacle	Next Biggest
1. It requires several of years of education.	25 33%	5 7%	29 27%	10 9%
2. *I would rather concentrate more on family, marriage, and children.	4 5%	12 16%	15 14%	14 13%
3. *Males don't usually do this.	0	1 1%		
4. *Females don't usually do this.			5 5%	6 6%
5. It requires much intelligence.	10 13%	6 8%	11 10%	14 13%
6. *It requires much aggressiveness.	5 7%	5 7%	7 6%	7 6%
7. *It requires much ambition.	8 11%	10 13%	9 8%	9 8%
8. *It requires much mental toughness.	5 7%	10 13%	9 8%	9 8%

*Variables considered to be sex-role stereotyped.

APPENDIX D

Piers-Harris Items

Item Content of Cluster Scales

Item Number	Item
	I. Behavior (16 items)
12	I am well behaved in school.*
13	It is usually my fault when something goes wrong.
14	I cause trouble to my family.
21	I am good in my school work.*
22	I do many bad things.
25	I behave badly at home.
34	I often get into trouble.
35	I am obedient at home.
38	My parents expect too much of me.
45	I hate school.
48	I am often mean to other people.
56	I get into a lot of fights.
59	My family is disappointed in me.
62	I am picked on at home.
78	I think bad thoughts.
80	I am a good person.*
	II. Intellectual and School Status (17 Items)
5	I am smart.*
7	I get nervous when the teacher calls on me.*
9	When I grow up,I will be an important person.
12	I am well behaved in school.*
16	I have good ideas.
17	I am an important member of my family.
21	I am good in my school work.*
26	I am slow in finishing my school work.
27	I am an important member of my class.
30	I can give a good report in front of the class.
31	In school I am a dreamer.
33	My friends like my ideas.*
42	I often volunteer in school.
49	My classmates in school think I gave good ideas.*
53	I am dumb about most things.
66	I forget what I learn.
70	I am a good reader.

* Items which load significantly on more than one cluster scale.

III. Physical Appearance and Attributes (13 items)

5 I am smart.*
8 My looks bother me.*
15 I am strong.
29 I have pretty eyes.
33 My friends like my ideas.*
41 I have nice hair.
49 My classmates in school think I have good ideas.*
54 I am good looking.
57 I am popular with boys.
60 I have a pleasant face.*
63 I am a leader in games and sports.
69 I am popular with girls.*
73 I have a good figure.

IV. Anxiety (14 items)

4 I am often sad.
6 I am shy.*
7 I get nervous when the teacher calls on me.*
8 My looks bother me.*
10 I get worried when we have tests in school.
20 I give up easily.
28 I am nervous.
37 I worry a lot.
39 I like being the way I am.*
40 I feel left out of things.*
43 I wish I were different.*
50 I am unhappy.*
74 I am often afraid.
79 I cry easily.

V. Popularity (12 items)

1 My classmates make fun of me.*
3 It is hard for me to make friends.
6 I am shy.*
11 I am unpopular.
40 I feel left out of things.*
46 I am among the last to be chosen for games.
49 My classmates in school think I have good ideas.
51 I have many friends.
58 People pick on me.
65 In games and sports, I watch instead of play.
69 I am popular with girls.*
77 I am different from other people.

VI. Happiness and Satisfaction (10 items)

2	I am a happy person.
8	My looks bother me.*
36	I am lucky.
39	I like being the way I am.*
43	I wish I were different.*
50	I am unhappy.*
52	I am cheerful.
60	I have a pleasant face.*
67	I am easy to get along with.
80	I am a good person.*

APPENDIX E

Work Values Inventory

WORK VALUES INVENTORY

Donald E. Super

Teachers College, Columbia University

THE RIVERSIDE
PUBLISHING COMPANY

An Examination Kit for the Work Values Inventory by Donald Super may be secured by qualified school personnel from Riverside Publishing Company (8420 Bryn Mawr Avenue, Chicago, Illinois 60631) free of charge if this dissertation is referenced in your request.

APPENDIX F

Student Questionnaire

Questionnaire

ALL OF YOUR ANSWERS WILL BE CONSIDERED CONFIDENTIAL (only you and I will see your answers)

1. Name _____

2. Sex Female _____ Male _____

3. How good a student would you say you are? (circle one)

   1. One of the best students in your grade.
   2. Above the middle of the class.
   3. In the middle of the class.
   4. Just good enough to get by.
   5. Don't know.

4. How much education do you think you will have? (circle one)

   1. Don't care if I finish high school or not.
   2. Finish high school only.
   3. Technical, nursing, or business school after high school.
   4. Graduate from a two year college.
   5. Some college but less than four years.
   6. Graduate from a four-year college.
   7. Professional or graduate school.
   9. Other _____

5. Have you ever thought about what kind of job you would like in the future? (circle one)

   1. yes 2. no

6. What jobs have you considered doing after you finish your education?

   First choice _____

   Second choice _____

   Third choice _____

7. Is there anything you did not list in number six that you would really like to do, but don't believe you would have an opportunity to do? If so, list the job or career here and tell why you don't think you would be able (or allowed) to do it. _____

   _____

8. Think of the job you most want to be doing when you are an adult. Choose below the biggest obstacle you see toward getting this job. (Tell the number of the obstacle)

   Biggest obstacle _____ Next biggest _____

   1. It requires alot of years of education.
   2. I would rather concentrate more on family, marriage, and children.
   3. Males don't usually do this.
   4. Females don't usually do this.
   5. It requires alot of intelligence.
   6. It requires alot of aggressiveness.
   7. It requires alot of ambitiousness.
   8. It requires alot of mental toughness.
   9. Other _____

*On the next two questions, think about opportunities and your chances in your future as an adult.....

9. On a scale from one to nine, rate your chances of getting a high paying job (circle a number that best represents how great a chance you feel you have).

1	2	3	4	5	6	7	8	9
Not a good chance								There is a very good chance

10. On a scale from one to nine, rate your chances of getting a job with high prestige (high prestige means a job where you are respected and looked up to, a job where you are admired by other people)

(circle a number that best represents how great a chance you feel you have)

1	2	3	4	5	6	7	8	9
Not a good chance								There is a very good chance

11. If a man and woman have the same qualifications (same experience and knowledge), do you think they have the same chances of getting a high paying job with prestige?

1. yes 2. no Why? _____

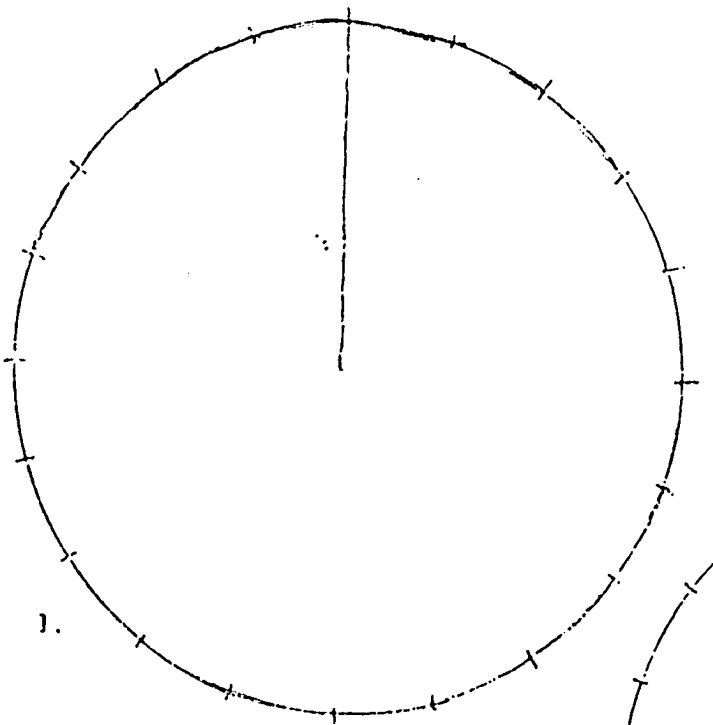
_____

12. How much money do you think you will be making when you are 35 years old? (circle one)

1. $10,000 to $20,000 a year
2. $20,000 to $30,000 a year
3. $30,000 to $40,000 a year (what most people will be making)
4. $40,000 to $50,000 a year
5. More than $50,000 a year

13. Pretend that the first circle below represents your life in the future as an adult. Divide the circle like pieces of a pie to show how important marriage, work, children, and other things will be in your life. The bigger the piece of pie the more important it is to you --- the smaller the less important.

Divide the circle into four parts: Marriage, work, children, and other. There are two circles in case you want to change your mind. If you re-do your circle, put a large X over the one that is not correct. Show the circle that is closest to how you feel, and label each part.



1.

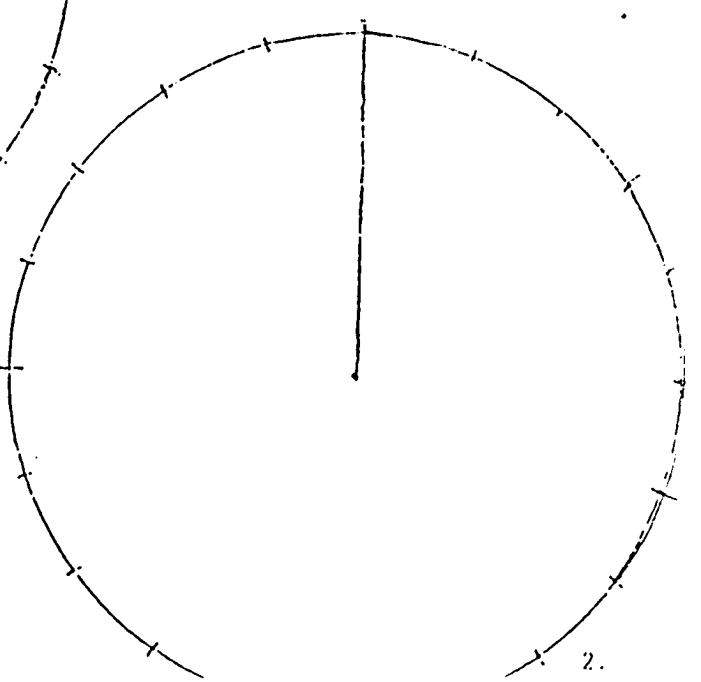
*Use these letters to label the sections:

M = Marriage

W = Work

Ch = Children

O = Other



2.

APPENDIX G

Factor Analyses of Work Values Inventory

Factor Analyses of Work Values Inventory

Males

I	II	III	IV	V
Achievement .678	Surroundings .809	Associates .641	Management .672	Creativity .615
Way of Life .650	Supervisory Relations .543	Esthetics .501	Independence .780	Economic Returns .757
Intellectual Stimulation .744	Security .653	Variety .748		
(Altruism) .617	Prestige .502	Altruism .624	(Variety) .525	
		(Supervisory Relations) .502	(Esthetics) .487	

Females

I	II	III
Achievement .698	Surroundings .579	Creativity .739
Prestige .723	Supervisory Relations .712	Management .479
Independence .566	Way of Life .592	Esthetics .752
Altruism .740	Security .779	Variety .590
Intellectual Stimulation .628	Associates .507	
(Management) .453	Economic Returns .798	
(Surroundings) .475		
(Way of Life) .509		
(Associates) .448		

*Note: Values in parentheses loaded secondarily on the factor.

FOUR BASIC DIMENSIONS* OF THE WORK VALUES INVENTORY, 1968-69 FORM FOR 51 TENTH GRADE MALES

I Material		II Goodness of Life		III Self-Expression		IV Behavior Control	
			Test				
10 Security	0.89	13 Associates	0.87	3 Creativity	0.74	5 Independence	0.78
9 Economic Returns	0.88	1 Altruism	0.71	14 Variety	0.71	8 Management	0.74
12 Supervisory Relations	0.75	11 Surroundings	0.65	4 Intellectual Stimulation	0.61	7 Prestige	0.60
11 Surroundings	0.58						
15 Way of Life	0.56						
			Re-Test				
12 Supervisory Relations	0.86	1 Altruism	0.85	14 Variety	0.82	5 Independence	0.81
10 Security	0.86	2 Esthetics	0.75	4 Intellectual Stimulation	0.77	8 Management	0.74
11 Surroundings	0.84	6 Achievement	0.59	3 Creativity	0.72		
9 Economic Returns	0.84						
13 Associates	0.80						
7 Prestige	0.74						
15 Way of Life	0.71						

*In the first testing, a doubtful fifth factor had loadings on the Esthetics and Achievement scales.

FOUR BASIC DIMENSIONS OF THE WORK VALUES INVENTORY, 1968-69 FORM FOR 48 TENTH GRADE FEMALES

I Material		II Goodness of Life		III Self-Expression		IV Behavior Control	
			Test				
11 Surroundings	0.87	6 Achievement	0.75	5 Independence	0.78	8 Management	0.80
9 Economic Returns	0.85	15 Way of Life	0.65	3 Creativity	0.78	4 Intellectual Stimulation	0.75
10 Security	0.84	1 Altruism	0.53	2 Esthetics	0.77		
12 Supervisory	0.78			14 Variety	0.56		
7 Prestige	0.59						
13 Associates	0.56						
			Re-Test				
9 Economic Returns	0.89	1 Altruism	0.85	3 Creativity	0.92	15 Way of Life	0.88
10 Security	0.88	6 Achievement	0.71	2 Esthetics	0.82		
12 Supervisory Relations	0.85	13 Associates	0.70	5 Independence	0.81		
11 Surroundings	0.83	4 Intellectual Stimulation	0.60	14 Variety	0.67		
		7 Prestige	0.56	8 Management	0.59		

APPENDIX H

Intercorrelations of Piers-Harris Scales

Intercorrelations of Piers-Harris Scales - Males

	Behavior	Intellectual & School Status	Physical Appearance	Anxiety	Popularity	Happiness	Total
Behavior	1.000	.518	.395	.151	.337	.337	.606
Intellectual & School Status		1.000	.628	.501	.651	.510	.773
Physical Appearance			1.000	.468	.748	.690	.821
Anxiety				1.000	.659	.712	.715
Popularity					1.000	.633	.818
Happiness						1.000	.803
Total							1.000

Intercorrelations of Piers-Harris Scales - Females

	Behavior	Intellectual & School Status	Physical Appearance	Anxiety	Popularity	Happiness	Total
Behavior	1.000	.511	.425	.466	.460	.576	.718
Intellectual & School Status		1.000	.676	.413	.472	.397	.756
Physical Appearance			1.000	.481	.646	.587	.800
Anxiety				1.000	.596	.712	.750
Popularity					1.000	.510	.763
Happiness						1.000	.755
Total							1.000

APPENDIX I

Intercorrelations of Work Values Inventory Scales

Intercorrelations of Work Values Inventory - Males

	Creativity	Management	Achievement	Surroundings	Supervisory Relations	Way of Life	Security	Associates	Esthetics	Prestige	Independence	Variety	Economic Returns	Altruism	Intellectual Stimulation
Creativity	1.00	.216	.417	.162	.042	.171	.064	.285	.412	.142	.311	.126	-.114	.259	.217
Management		1.00	.252	.302	.044	.165	.215	.300	.344	.345	.326	.542	.077	.108	.204
Achievement			1.00	.265	.420	.375	.285	.433	.312	.505	.403	.245	.232	.514	.392
Surroundings				1.00	.353	.241	.335	.318	.261	.288	.132	.143	.071	.113	.018
Supervisory Relations					1.00	.332	.432	.425	.245	.354	-.036	.264	.244	.413	.253
Way of Life						1.00	.101	.234	.116	.370	.356	.163	.199	.408	.259
Security							1.00	.275	.184	.396	.151	.342	.293	.090	.059
Associates								1.00	.280	.283	.171	.469	.072	.407	.127
Esthetics									1.00	.161	.358	.506	-.102	.278	-.058
Prestige										1.00	.282	.295	.279	.173	.227
Independence											1.00	.340	.137	.167	.104
Variety												1.00	.262	.379	.035
Economic Returns													1.00	.025	.020
Altruism														1.00	.393
Intellectual Stimulation															1.00

Intercorrelations of Work Values Inventory - Females

	Creativity	Management	Achievement	Surroundings	Supervisory Relations	Way of Life	Security	Associates	Esthetics	Prestige	Independence	Variety	Economic Returns	Altruism	Intellectual Stimulation
Creativity	1.00	.470	.352	.408	.220	.314	.321	.346	.464	.366	.310	.371	.210	.365	.301
Management		1.00	.281	.471	.198	.346	.317	.302	.235	.527	.407	.329	.398	.258	.220
Achievement			1.00	.369	.149	.380	.202	.323	.064	.498	.386	.335	.152	.520	.264
Surroundings				1.00	.347	.595	.493	.519	.268	.436	.250	.330	.533	.465	.291
Supervisory Relations					1.00	.363	.522	.308	.431	.243	.169	.443	.506	.128	-.007
Way of Life						1.00	.471	.501	.274	.536	.409	.271	.466	.438	.268
Security							1.00	.461	.324	.480	.303	.338	.636	.328	.196
Associates								1.00	.321	.499	.252	.290	.351	.324	.365
Esthetics									1.00	.139	.164	.374	.370	.023	-.030
Prestige										1.00	.616	.310	.418	.466	.383
Independence											1.00	.260	.311	.329	.213
Variety												1.00	.465	.241	.214
Economic Returns													1.00	.164	.166
Altruism														1.00	.376
Intellectual Stimulation															1.00